G. T. PARRY.

Combined Street-Lamp and Gas-Machine.

No. 165,499. Patented July 13, 1875.

Fig. 1

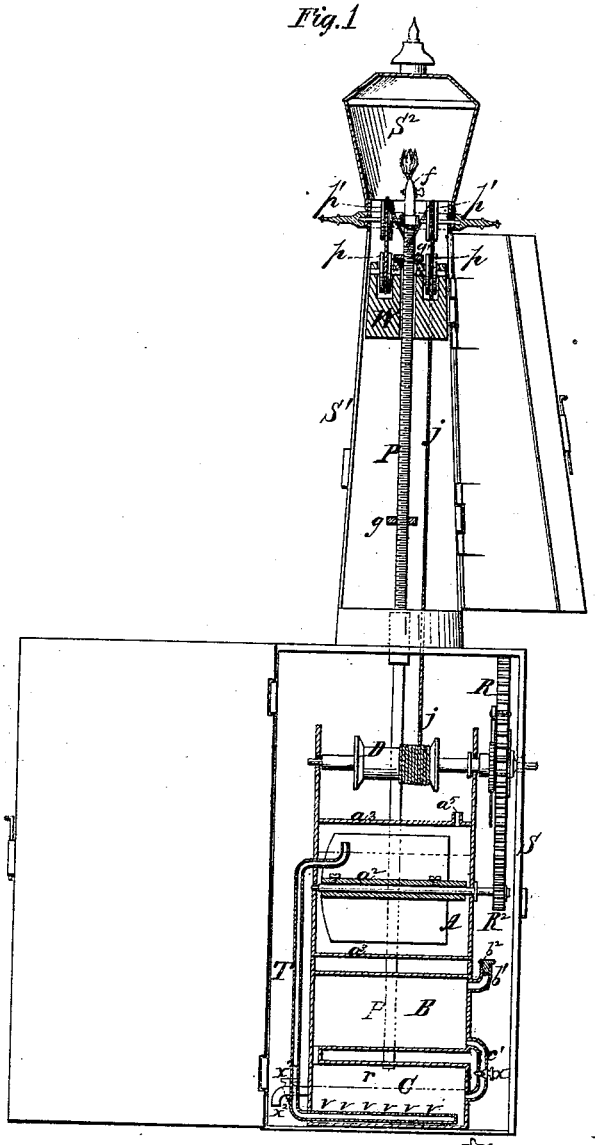


Fig. 2

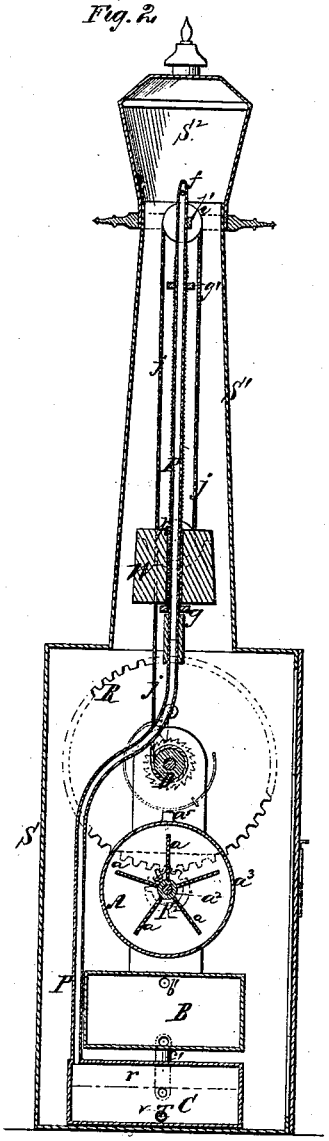
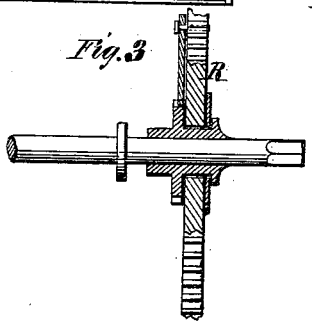


Fig. 3



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GEORGE TRACEY PARRY, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN COMBINED STREET-LAMPS AND GAS-MACHINES.

Specification forming part of Letters Patent No. **165,499**, dated July 13, 1875; application filed April 20, 1875.

To all whom it may concern:

Be it known that I, GEORGE T. PARRY, of Philadelphia, county of Philadelphia and State of Pennsylvania, have invented a new and useful Combination of a Portable Street-Lamp Post and a Carbureting Gas-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a sectional front elevation of the lamp-post, with the door of the upper and lower sections of the post thrown open, so as to expose to view the interior works thereof; and Fig. 2, a vertical side section. Fig. 3 is a detached view of the key-shaft and the main drive-wheel, through which rotation is imparted to the "blower."

The lower section S constitutes about one-half of the height of the lamp-post, and is in rectangular form, as shown, being, in fact, a hollow box, from the top of which projects the cone-shaped hollow upper section S^1, which terminates at the base of a lamp, S^2, upon its top.

The object of my invention is to furnish a cheap portable street-lamp post for country towns, roads, parks, and other outdoor localities which are not provided with the ordinary gas-works in common use, and by which the expense of such works and their underground mains and pipes are avoided.

My invention consists of a hollow lamp-post, in combination with a carbureting gas-machine, in which illuminating-gas is produced by mixing atmospheric air with hydrocarbon-vapors, eliminated without the application of heat, for the supply of the burner in the lamp at the top of the post, such machine being entirely inclosed within the lamp-post.

In the drawing, A represents an ordinary blower, consisting of fans a, projecting from a fan-shaft, a^2, and inclosed in a circular casing, a^3. On one end of the fan-shaft is applied a pinion, R^2, which engages with a toothed drive-wheel, R, for the purpose of having motion imparted to the blower. An air-hole, a^5, is made in the casing a^3, through which atmospheric air is drawn by the fans into the blower. B is a tank for holding a supply of gasoline, and C the carbureter or tank for containing the gasoline, through which atmospheric air is forced by the action of the blower A. A pipe, c', connects the bottom of the supply-tank B with the carbureter C, the mouth of the pipe terminating at the required level of the gasoline in the carbureter, as shown by the dotted lines. The tank B is provided with an outlet-pipe, b^1, through which gasoline is supplied to the tank, and which pipe has an air-tight stopper. D represents a drum, for winding the cord j; one end of which cord, being fastened to the drum, runs through the pulleys $p\ p$ in the weight W, and also through the pulleys $p'\ p'$, fastened at the top of the lamp-post, as shown. The weight W is perforated through its center, to admit the pipe P to pass through it, and also freely permit the weight to pass up or down the pipe P, which leads from the air-space r in the carbureter C to the burner f at the end of the pipe in the lamp S^2 at the top of the post.

It will thus be seen that the pipe P serves as a guide for the weight W, as well as for the gas-pipe. This pipe is screw-threaded nearly the whole of its length within the section S^1 of the lamp-post, and is provided with a lower nut, g, and an upper nut, g', fitted to screw up and down on the pipe. The object of these nuts is to regulate or determine the number of hours the light is to burn—that is to say, the speed of the descending weight W being known, the lower nut can be screwed up to arrest the descent of the weight at any desired point, and the moment the weight W rests upon the nut g the rotation of the blower will cease, and the light, for the want of the supply of air, will instantly go out.

T represents a pipe leading from the interior of the blower down to the bottom of the carbureter C, at which point it is made in the form of a coil, and with perforations, as at v, in order that the air which is forced down the pipe T from the interior of the blower shall be expelled through these perforations, and rise in bubbles through the gasoline above the coil in the carbureter. The air thus forced through the gasoline becomes highly charged with carbon, and far more so than by passing it, as is usual, over its surface, which latter mode leaves a residue as it becomes exhausted.

By my mode of passing the air through the

gasoline, experiment has demonstrated that no residue of the gasoline is left, thus effecting a large saving to the consumer.

The pipe c', which connects the reservoir B with the carbureter C, is provided with a stop-cock, x; and an outlet-cock, x^2, is made in the carbureter C, on a line which shall determine the height of the gasoline therein.

The working of the whole arrangement is as follows: Remove the air-tight stopper b^2 on the end of the outlet-pipe b^1; then open the cocks x and x^2, and fill the tank B until the gasoline runs out of x^2; then close the cocks x and x^2, after which fill up the tank B to the top of the pipe b^1, and screw down the stopper, so that it will be air-tight. Next wind up the weight W until it touches the upper nut g'; then open the cock x, and screw up or down the lower nut g to a point on the pipe P at which the descent of the weight W will be arrested after a given number of hours has been occupied in its descent to such point. This being done, the operator will then close the doors, and light the burner f in the lamp S^2. The descent of the weight W from the point occupied by it, as shown in Fig. 1, unwinds the cord j from the drum D, thus causing the drum to rotate, which motion is imparted to the blower A through the main drive-wheel R and pinion R^2. As the weight descends, the air is forced through the pipe T into and through the gasoline in the carbureter C, and thence through the pipe P to the burner f, where it is inflamed. The weight continues to descend until it rests upon the lower nut g, thus stopping the rotation of the blower, and the supply and pressure of atmospheric air through the carbureter C and pipe P, at which instant the light goes out.

By this arrangement the expense of an extra man to put out the light at any given time is saved.

It will be seen that, as the evaporation goes on in the carbureter, the level of the gasoline therein is always maintained by the pipe c', which will only supply the demand required by the evaporation of the gasoline in the carbureter.

The gas-space r in the carbureter C, above the fluid-line, (shown in dots,) admits of more gas than is required for one burner, and hence the back pressure has the effect of making a steady light.

Having described my invention, I would state that I do not claim any of the modes by which light is produced in a street-lamp by the vapor of naphtha, as this vapor can only be produced by outward heat applied to the pipe or vessel containing it, and is always attended with danger. Neither do I claim any plan of reservoir, movable or immovable, for containing oil or naphtha, or any plan to enrich the ordinary gas from a distant gasometer; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a street-lamp post, of a carbureting gas-machine, in which illuminating-gas is produced by the mixture of atmospheric air with hydrocarbon-vapor, said vapor being eliminated without the application of heat, substantially as described.

2. A portable street-lamp post, in combination with a weight, which, through a cord and pulleys, imparts rotation to a blower, substantially as and for the purpose described.

3. A portable street-lamp post, in combination with a carbureting-machine, which has its supply of air automatically stopped at variant regulated periods of time, substantially as described.

4. A portable street-lamp post, in combination with a carbureting apparatus and with a gas-burner, which has its light automatically extinguished at variant regulated periods of time, substantially as described.

5. A portable street-lamp post, in combination with a carbureting apparatus, provided with adjustable nuts $g\ g'$, for regulating the number of hours the light shall burn, substantially as described.

6. The street-lamp post, constructed as described, and furnished on its inside with the within-specified carbureting apparatus, substantially as and for the purpose described.

Witness my hand in matter of my application for a patent for portable street-lamp post and carbureting gas-machine combined.

GEORGE TRACEY PARRY.

Witnesses:

T. RUSLING DAVIS,

FRANK NEWCOME.