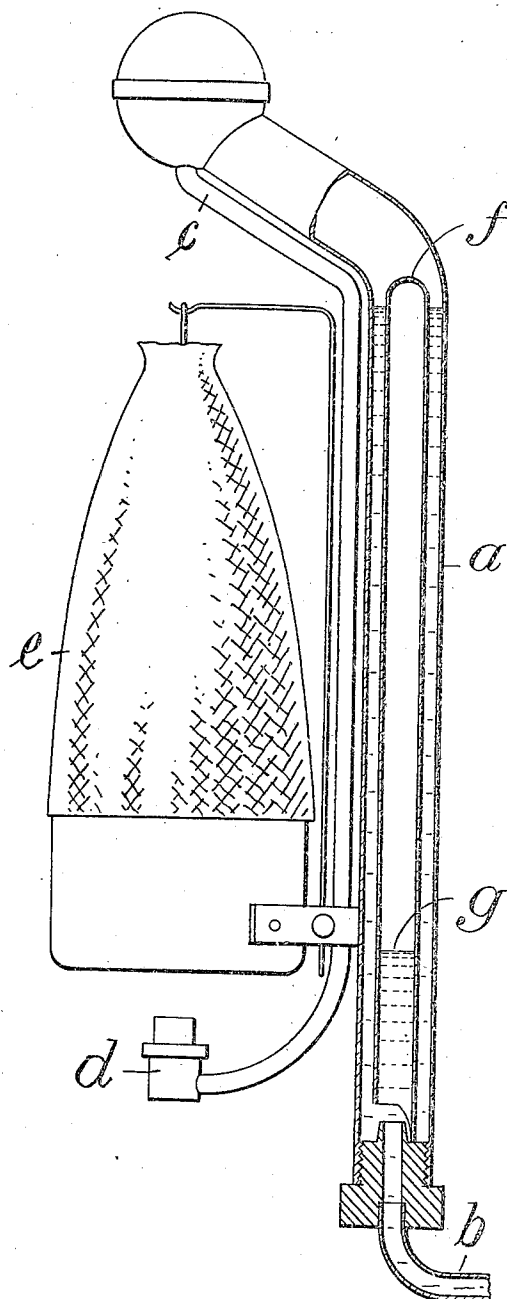


F. J. H. RUSTIGE.
 REGULATING DEVICE FOR VAPORIZERS.
 APPLICATION FILED JUNE 24, 1909.

952,142.

Patented Mar. 15, 1910.



WITNESSES.

W. P. Burke
 John A. General

INVENTOR

Francis Johann Henrik Rustige
 BY *[Signature]*

ATTN

UNITED STATES PATENT OFFICE.

FRANS JOHAN HENRIK RUSTIGE, OF STOCKHOLM, SWEDEN.

REGULATING DEVICE FOR VAPORIZERS.

952,142.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed June 24, 1909. Serial No. 504,079.

To all whom it may concern:

Be it known that I, FRANS JOHAN HENRIK RUSTIGE, a citizen of Sweden, residing at 8 Kungsholinstoeg, Stockholm, Sweden, engineer, have invented new and useful Improvements in Regulating Devices for Vaporizers, of which the following is a specification.

In burners for liquid fuel, that are intended for illuminating purposes, it is of special importance that the fuel be easily and speedily supplied to the vaporizer, as the vaporizing proceeds, and that the fuel may as easily be removed from the hotter parts of the vaporizer, if more gas be produced there than can escape from the burner. In such illuminating apparatus, where the fuel tank is placed adjacent to the vaporizer and in immediate connection with the same, such a regulation of the fuel supply can be easily effected by making the pipe, through which the fuel is carried from the tank to the vaporizer, short and of large diameter. In such apparatus, however, where the vaporizer is situated at a longer distance from the fuel tank and connected to the same by a long conduit, it is rather difficult to obtain a uniform vaporization and a steadily burning flame. This is due to the fact that the liquid fuel contained in the conduit by the slightest cause, for instance shocks or irregularities in the vaporization, is brought in an oscillatory movement, whereby the surface of the fuel column contained in the conduit is moved up and down, causing speed changes in the vaporization and making the light unsteady. The more distant from the vaporizer the tank is situated, the longer and slower the oscillations of the fuel column will be, and vice versa, so that the said oscillations, when the vaporizer is situated close to the tank, will not have the same bad influence on the light as when the distance is greater. To eliminate or reduce the above-mentioned inconvenience in illuminating apparatus with a long fuel conduit, the latter has been provided with very small cross sectional area or with a throttle valve, by which the fuel supply to the vaporizer has been controllable according to the consumption. In both cases, however, a considerable loss of pressure has been the result, being a great inconvenience, especially in

such vaporizing apparatus, where the fuel is forced to the vaporizer only by its own gravity.

The present invention has for its object another, more effective arrangement for providing a steadily burning flame in such vaporizing apparatus and consists in the arrangement inside the vaporizer of a gasometer, that regulates the fuel supply to the vaporizer in accordance with the activity of the vaporization, whereby an even flame is secured.

In the accompanying drawing an illuminating apparatus embodying the invention and operating with petroleum is shown.

a is the vaporizer, *b* the conduit to the same from the fuel tank, *c* a gas conduit leading from the vaporizer to the burner nozzle *d* and *e* the incandescent mantle.

According to the present invention there is arranged, inside the vaporizer and above the mouth of the conduit *b*, a gasometer, consisting of a cap or a pipe *f* closed at the top.

When the vaporizer is in action, the liquid fuel in the same reaches about up to the same height as the top of the mantle and in the gasometer about to the point *g*. If violent movements arise in the liquid in the supply conduit *b* or in the vaporizer *a*, they are immediately equalized by the gasometer *f*, which hereby admits or delivers liquid, so that the level in the vaporizer is kept almost constant.

The shape and the size of the gasometer can of course be altered in accordance with the vaporizer and the fuel pressure.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:

1. In combination with a burner, a vaporizer tube connected therewith, means for delivering fuel to said vaporizer tube, and a tube in said vaporizer tube having its upper end closed and its lower end communicating with the vaporizer tube and located immediately above the delivery means.

2. In combination with a burner, a vaporizer, a pipe connected at one end with the upper end of the vaporizer above the fuel therein, the other end of said pipe being connected with the burner, a fuel supply

pipe connected with the lower end of the vaporizer and a tube in said vaporizer having its upper end closed and its lower end communicating with the vaporizer and located immediately above the end of the supply pipe.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

FRANS JOHAN HENRIK RUSTIGE.

Witnesses:

BIRGER NORDFELDT,

H. TELANDER.