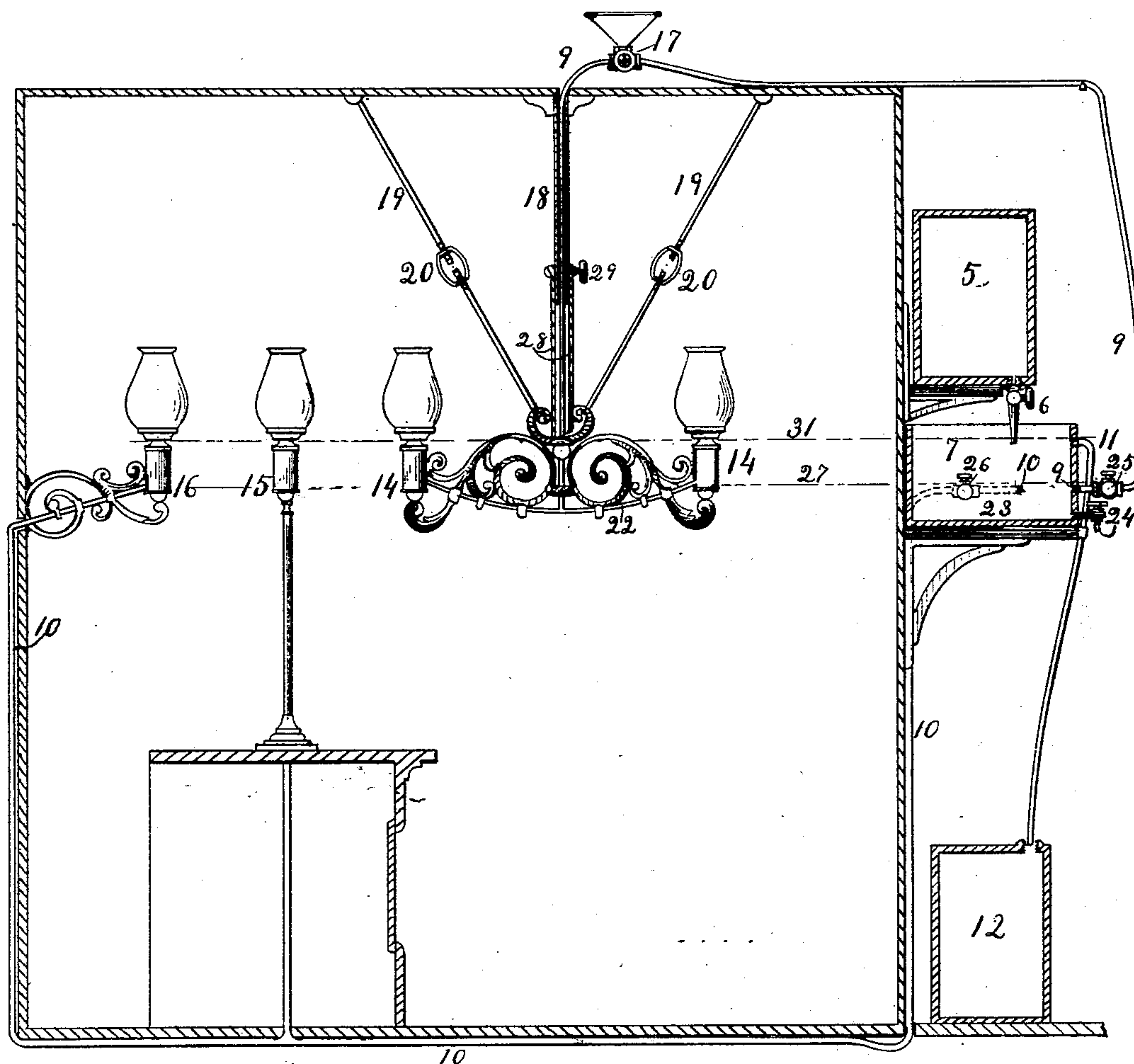


(No Model.)

T. SCHULZ & F. A. CODY.
HYDROCARBON LIGHTING DEVICE.

No. 411,170.

Patented Sept. 17, 1889.



WITNESSES

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THEODORE SCHULZ AND FREDERICK A. CODY, OF ROCHESTER, NEW YORK.

HYDROCARBON-LIGHTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 411,170, dated September 17, 1889.

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To all whom it may concern:

Be it known that we, THEODORE SCHULZ and FREDERICK A. CODY, citizens of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Hydrocarbon-Lighting Devices; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of house-lighting devices in which a system of stationary lamps is supplied with hydrocarbon by means of pipes communicating with a reservoir.

The object of our invention is, first, to provide means for safely filling the reservoir, and for consuming the overflow before there has been time for sediment to gather in it; second, to provide means whereby only the light and pure oil shall be drawn from the distributing-tank to the lamps, and whereby the sediment which gradually accumulates in the distributing-tank may be drawn off without emptying the supply-pipes; third, to provide means whereby the pipes of the whole system may be at first charged or primed; fourth, to provide means for leveling two or more lamps suspended upon one hanger and maintaining them in a level position; fifth, to provide means to prevent the oil from syphoning out of the supply-pipes when the oil is consumed in the lamps without causing sediment to settle in the oil which is left as a priming in the supply-pipe.

To this end our invention consists in the construction and combination of parts forming a "hydrocarbon-lighting device," as hereinafter described and claimed, reference being had to the accompanying drawing, which is a general view showing the positions of the various parts relative to each other in a house, some parts being shown in section and some parts broken to expose the interior, no regard being had to proper proportions of the parts relative to each other, each part being made as large as possible on the paper in order to show its characteristics distinctly, and all the parts appearing very much too large relative to the size of the room.

5 represents the supply-reservoir, and 6 a stop-cock; 7, the distributing-tank; 9 10, distributing-pipes, and 11 its escape-pipe.

Each pipe, which, like pipe 9, rises to pass over some obstruction—such as the ceiling of the room—between the lamp and the reservoir we call a "siphon-pipe," because of its form and action.

12 is the overflow-receptacle.

14 15 16 represent lamps; 17, a priming-cock; 18, the hanger for the lamps 14; 19, stay-braces, and 20 swivel-nuts thereon.

22 is a drop-curved pipe; 23, the settling-space; 24, the discharge-faucet; 25 26, stop-cocks in the distributing pipes; 27, a broken line showing the level of the bottoms of the lamps; 28, a telescoping-pipe; 29, a set-screw.

31 is a broken line showing the oil-escape level.

The reservoir 5 has but one opening, and that is provided with a screw-thread to receive the stop-cock 6, whose lower end depends into the tank 7. The receptacle 12 is an exact duplicate of the tank 5, having the same-sized screw-threaded opening, so that the two vessels are interchangeable. When the reservoir becomes empty, the receptacle 12 should be filled with fresh oil, the stop-cock 6 should be screwed into the receptacle, and it now takes the place of the reservoir, and the reservoir is to be placed as a receptacle. Pipe 11 is connected with the tank 7 near its top, to serve as an outlet for the oil to overflow through in case the tank should become too full, and its lower end delivers into the receptacle 12. Every time the reservoir becomes empty it should exchange places with the receptacle. By this means the overflow is mixed with fresh oil and used before it can become foul, as it would do if it were allowed to stand until the receptacle becomes filled, and the danger of pouring from the receptacle into the reservoir is avoided. The distributing-pipes 9 10 connect with the tank 7 a little above the bottom, in order to leave a settling-space 23 below them for dregs to gather in, so that the pipes may carry only pure oil to the lamps. The discharge-faucet 24 enters the settling-space at or near its bottom, in order that the dregs may be drawn off at will. This should of course be done when the oil in the tank is low, and we have pro-

vided stop-cocks 25 26 in the distributing-pipes to close them and prevent their priming being lost when the dregs are discharged. The cock 17 is located at the highest point of each siphon-pipe, and it is adapted to admit a tunnel through which oil may be poured to prime the pipe—that is, to fill it the first time—after which the balance of the oil in the two depending arms of the siphon will keep it full. The bottoms of all the lamps in the system should be set on a level with line 27, which is just above the plane of the inlets to pipes 9 10, in order that the wicks resting on the bottoms within the lamps may not draw the oil in the tank so low as to admit air to those pipes, because that would create disturbance to the working of the system and sometimes involve danger. All pipes which must run overhead have to be made siphons, like pipe 9, the delivery or lamp end being always lower than the head of oil in the tank.

In order to set the lamps 14 at the proper level, we provide their supporting-frame with a pipe 28 to telescope upon the hanger 18, which is suspended from the ceiling, and 29 is a set-screw, whereby the two pipes may be fixed together at any point. The pipe 9, being of lead, will yield a little above the ceiling to permit this leveling. If only one lamp were to be held by one hanger, the telescoping pipe and set-screw would serve to level it; but when two or more lamps 14 are to be hung upon the arms of one hanger we provide the braces 19 and the swivel-screw 20 thereon, whereby the lower end of the hanger may be adjusted sidewise to level both lamps and to hold them so permanently. The junction of the pipe 9 with the pipe 22, which extends laterally to the lamps 14, is in the drop curve of the pipe 22, some distance below the bottoms of the lamps, in order that when the oil in the lamps is exhausted enough to admit air to the ends of the pipes there will still remain enough oil in the drop-curve to prevent a bubble of air from rising into the pipe 9; and in order that the oil may flow freely from this drop-curve we have taken especial pains to avoid any pit, enlargement, or well at the

foot of pipe 9, which might serve as a gathering-place for sediment, because that would contaminate oil that had to pass through it.

The wicks and other appurtenances of the lamps may be of any usual or preferred form.

Any equivalent means of fixing the pipes 18 28 together may be used in place of the set-screw 29; also, any equivalent may be substituted for the swivel-nuts 20 for adjusting the length of the braces 19.

In order that the lamps may never overflow, their tops should be placed on the level of line 31, and the escape-pipe 11 should be just below it. This prevents the head of oil in the distributing-tank from rising above the tops of the lamps.

Having thus fully described our invention, what we believe to be new, and desire to secure by Letters Patent, is the following:

1. The combination of a hydrocarbon-distributing reservoir having an opening at its top, an outlet-pipe entering the side thereof near its top, a reservoir and an overflow-receptacle, each provided with one screw-threaded aperture, and a stop-cock adapted to engage either of the said apertures, whereby the reservoir and receptacle are interchangeable.

2. The combination, with a siphon-shaped hydrocarbon-distributing pipe, of a priming-cock located near the highest point of the siphon, and adapted to admit a tunnel.

3. The combination of two hydrocarbon-lamps and a hanger therefor comprising two telescoping pipes, one of which is provided with a set-screw, and two braces, each provided with a swivel screw-nut, a reservoir fixed on a level with the lamps, and a pipe connecting the said reservoir and lamps, substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

THEODORE SCHULZ.
FREDERICK A. CODY.

Witnesses:

W. X. STEVENS,
M. P. CALLAN.