

No. 620,229.

Patented Feb. 28, 1899.

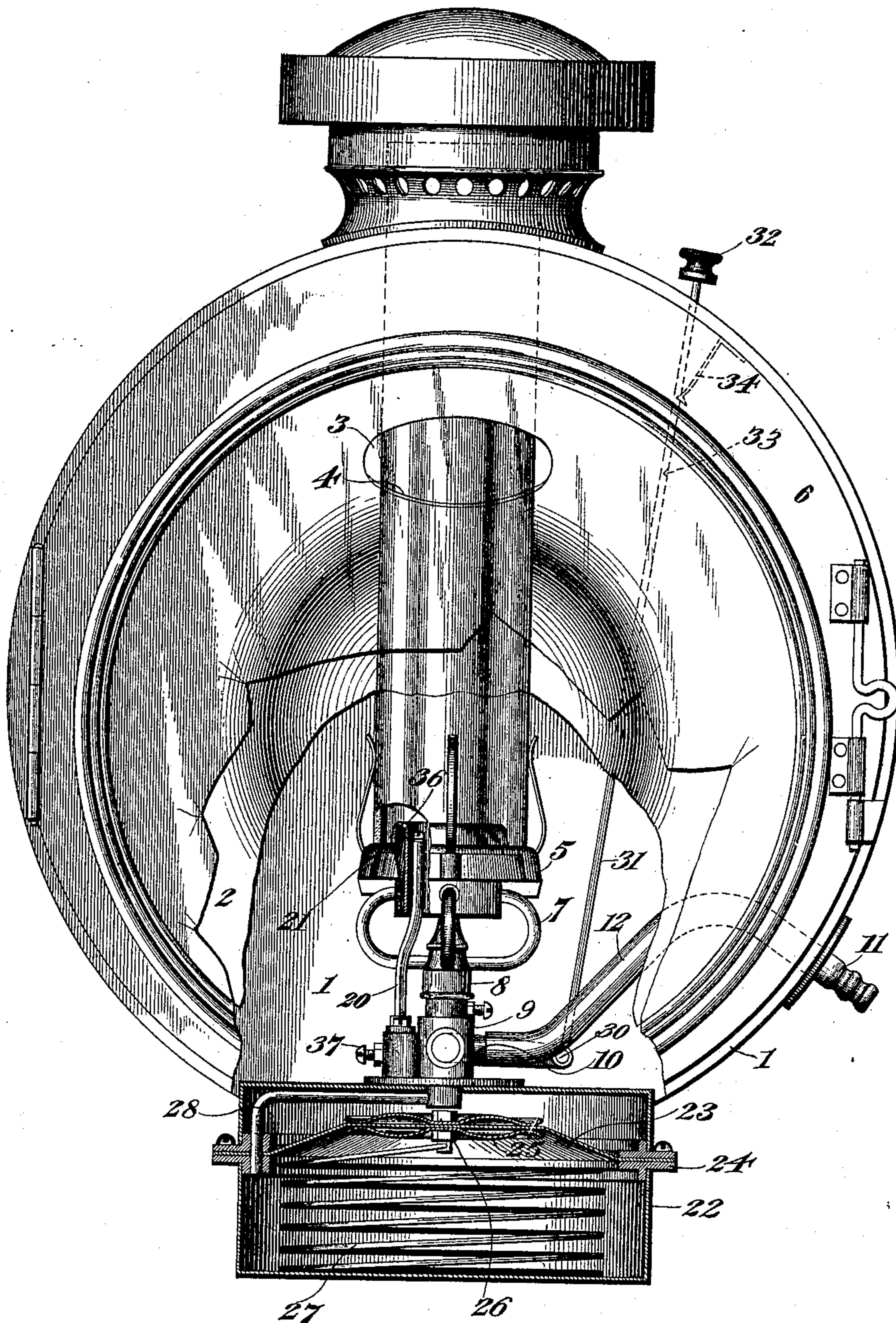
J. L. CREVELING.
HEADLIGHT.

(Application filed Sept. 8, 1897.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses

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Fig. II.

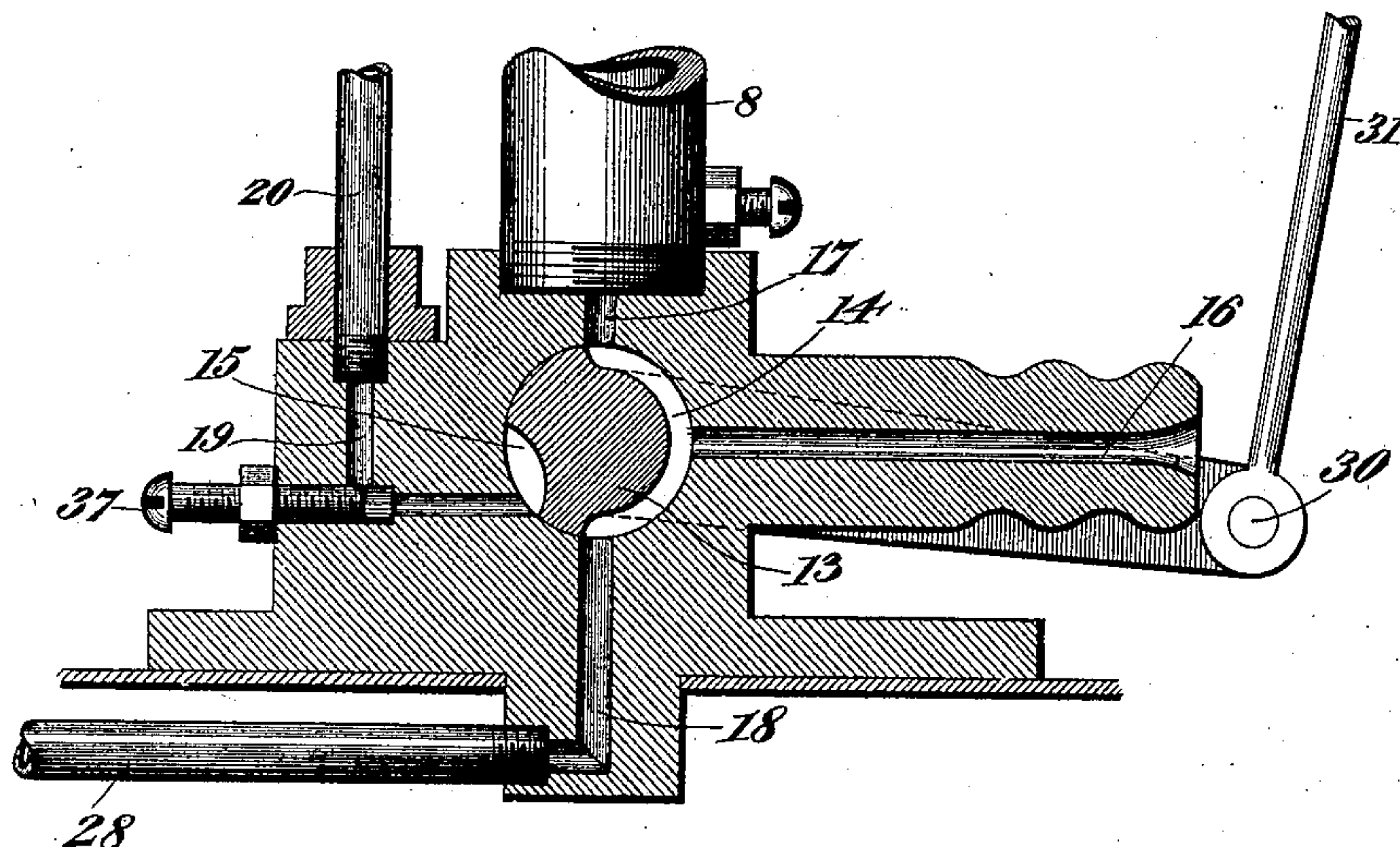
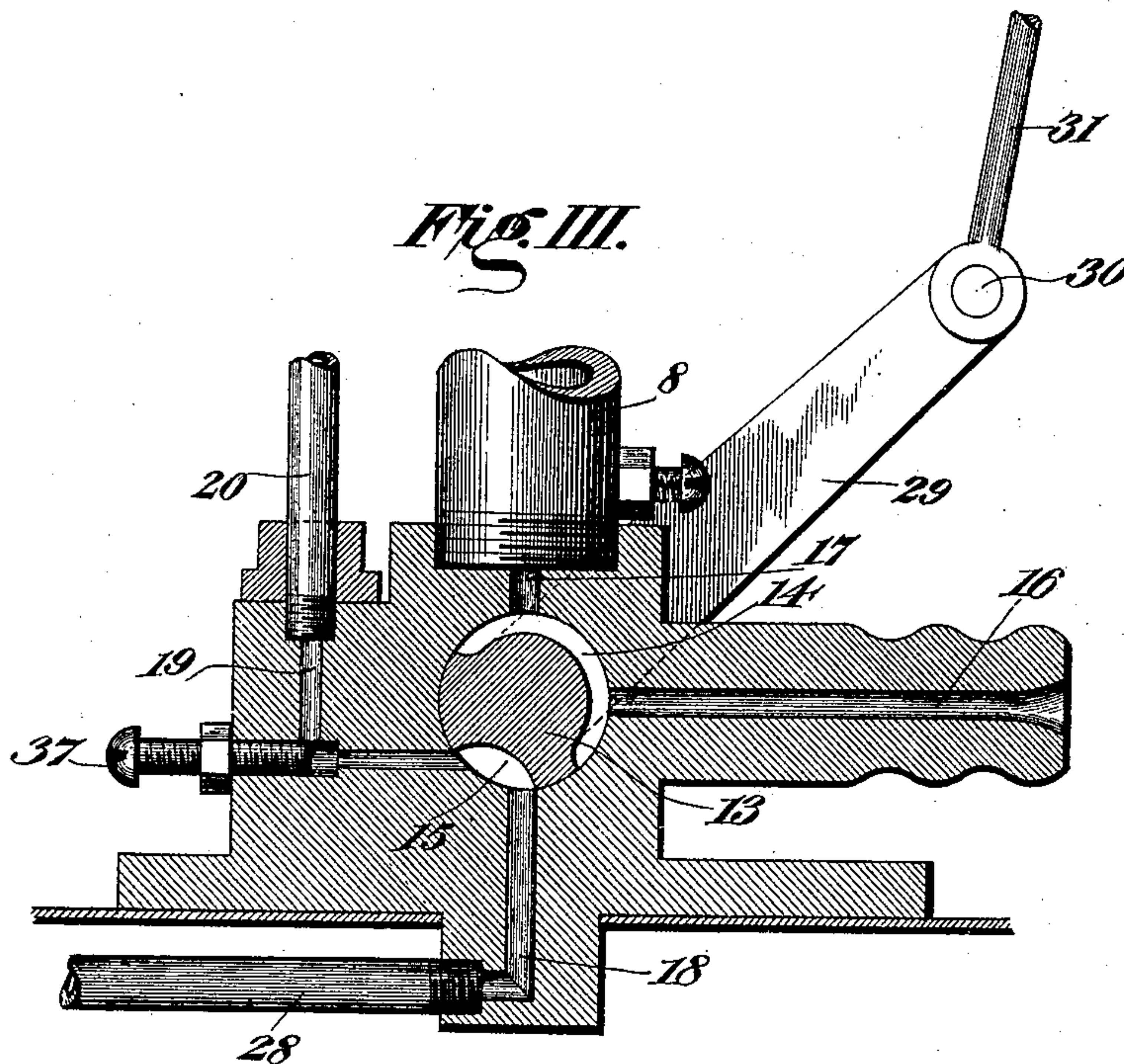


Fig. III.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN L. CREVELING, OF NEW YORK, N. Y., ASSIGNOR TO THE SAFETY CAR HEATING AND LIGHTING COMPANY, OF NEW JERSEY.

HEADLIGHT.

SPECIFICATION forming part of Letters Patent No. 620,229, dated February 28, 1899.

Application filed September 8, 1897. Serial No. 650,975. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. CREVELING, of New York, in the county of New York, State of New York, have invented certain new and useful Improvements in Headlights, of which the following is a complete specification, reference being had to the accompanying drawings.

The object of my invention is to produce improvements in headlights in which the flame is supplied from gas whereby when in use upon street-cars, for example, the flame can be kept burning while the lamp is being carried from one end of a car to another, as is necessary at the end of each run which the car makes.

In the accompanying drawings, Figure I is a front elevation, partially in section, of my headlight complete. Fig. II is a sectional view of the valve mechanism of the lamp and connected parts, upon an enlarged scale, showing the valve in the position for supplying gas to the burner, as in ordinary use. Fig. III is a similar view showing the valve in position for maintaining the flame of the burner when the lamp is disconnected from the main source of gas-supply.

Referring to the figures on the drawings, 1 indicates a headlight frame or body provided, as usual, with the ordinary parabolic reflector 2, for example, through an aperture 3 in which a chimney 4 is supported in the usual manner, as upon a burner 5.

6 indicates a glazed door or hinged face. All of the parts above enumerated may be of any usual or preferred construction. As illustrated, the burner 5 is of the well-known Argand type, supported, as by bent pipes 7, through which it derives its supply of gas, as from an upright tube 8. The tube 8 communicates through a valve-case 9 with a tube 10, that terminates in or is connected with a nipple 11, projecting through one side of the frame 1. The tube 10 and the nipple 11, as illustrated, are united, as by a piece of flexible tubing 12. The nipple 11 is designed to be detachably connected with a valve-controlled gas-supply system or reservoir of a car.

Within the valve-case 9 I provide a valve 13, (see Figs. II and III,) which is provided with separate recesses 14 and 15. The valve

13 moves within a seat or recess in the casing 9, and with the valve-seat communicates the bore 16 of the tube 10, a gasway 17, establishing communication with the interior of the tube 8, a gasway 18, communicating with an auxiliary source of gas-supply, and a gasway 19, communicating with a pipe 20, that supports an auxiliary burner or tip 21.

22 indicates an auxiliary source of gas-supply, which consists, essentially, of a gas-tight receptacle. The receptacle 22 is designed to receive and maintain a supply of gas under pressure. A variety of means may be employed for exerting pressure upon a volume of gas contained therein. By way of example of such means I show a flexible diaphragm 23, held between flanges 24, which, screwed together, unite the two parts of the receptacle. The diaphragm 23 is preferably provided with reinforcing-plates 25 and a stud 26, to which at one end is secured a tension-spring 27, that is secured at the other end to the bottom of the receptacle. A pipe 28 leads from the gasway 18 in the case 9 to the interior of the receptacle 22 underneath the diaphragm 23. The valve 13 is connected with a crank-arm 29, to the free end of which is pivoted, as indicated at 30, a rod 31, which, projecting upwardly through the body 1 of the headlight, terminates in a button 32, by manipulation of which the crank-arm 29 may be raised or lowered, as will hereinafter appear. The office of the crank requires that it shall be set in one of two positions. For that reason I provide mechanism for securing it in those positions. Such mechanism may consist simply of notches 33 in the rod 31 and an engaging spring-detent 34, secured to the inside of the body 1 and working against the rod in the path of the notches.

To accomplish the object of my invention, I provide the auxiliary source of gas-supply represented by the receptacle 22 and in connection therewith means for supplying gas therefrom to the burner when the headlight is disconnected. Inasmuch as the capacity of the receptacle 22 is necessarily limited provision must be made for supplying gas therefrom to the burner in such quantity as will not too speedily exhaust the supply. This might be accomplished by temporarily

shutting off the capacity of the burner 5; but in order to avoid the necessity of attention or manipulation of mechanism of any sort I prefer to provide, as above specified, the tube 5 20, supporting an auxiliary burner or tip 21. The tip 21 is located in proximity to the flame-supporting apertures 36, so that the flame from the auxiliary burner will ignite the gas from the main burner, and vice versa.

10 The gasway 19 may be provided with a set-screw 37, through which the capacity of the way may be regulated.

The operation of my headlight is as follows: Assuming the nipple 11 to be connected to the 15 main source of gas-supply and the valve 13 to be in the position shown in Fig. II, gas under pressure is admitted through the recess 14 of the valve and through the bore 16 into the ways 17 and 18. Through the former 20 it supplies gas to the apertures 36 of the burner and there supports the flame of combustion. Through the way 18 and the pipe 28 a portion of gas is supplied to the interior of the receptacle 22 underneath the dia- 25 phragm 23, raising the latter against the tension of the spring 27 and supporting a constant supply of gas within the receptacle ready whenever required to constitute an auxiliary source of gas-supply. While the 30 valve 13 is in the position shown in Fig. II, the rod 31 is in the position shown in Fig. I. If now it be desirable to temporarily separate the lamp from the main source of gas-supply, as in transporting the headlight from one end 35 of the car to another, the operator lifts the rod 31 by the aid of the button 32 until the detent 34 engages the lower notch 33 of the rod. By this operation the valve 13 assumes the position shown in Fig. III, in which the 40 recess 15 of the valve establishes communication between the ways 18 and 19, respectively, but without breaking communication between the bore 16 and the way 17. Upon the operation of the valve in the manner last 45 described gas from the receptacle 22 is supplied through the pipe 28, the way 18, the recess 15, the way 19, the tube 20 to the tip 21,

issuing whence it is ignited from the flame supported by the apertures 36. The nipple 11 may now be disconnected from the main 50 source of gas-supply and the lamp transported from one place to another, a flame being in the meantime maintained at the tip 21 during an interval proportionate to the capacity of the source of gas-supply and the relative 55 size of its discharge-outlet—to wit, the way 19, which, as above specified, is controllable by the screw 37. When the position of the lamp is changed and it is reestablished in position for use by connection of the main 60 source of gas-supply with the nipple 11, all that is required after the gas is ignited at the apertures 36 is to depress the button 32, and thereby restore the valve 13 to the position illustrated in Fig. II of the drawings. 65

What I claim is—

1. The combination with a lamp, and main burner, provided with means of communication with a main source of gas-supply, of an auxiliary burner in proximity to the main 70 burner, an auxiliary source of gas-supply communicating with the auxiliary burner, and valve mechanism adapted alternately to throw the main burner into communication with its source of gas-supply, and the auxil- 75 iary burner into communication with its source of gas-supply, substantially as and for the purpose specified.

2. The combination with a lamp, burner, and a receptacle, constituting an auxiliary 80 source of gas-supply, of a main source of gas-supply communicating with the burner and receptacle, respectively, an auxiliary burner, and valve mechanism adapted to break communication between the main burner and its 85 source of gas-supply, and to make connection between the auxiliary burner and its source of gas-supply, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

JOHN L. CREVELING.

Witnesses:

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ELMER E. ALBEE.