

(No Model.)

H. F. FULLER.

BURNER APPARATUS FOR ACETYLENE GAS.

No. 566,902.

Patented Sept. 1, 1896.

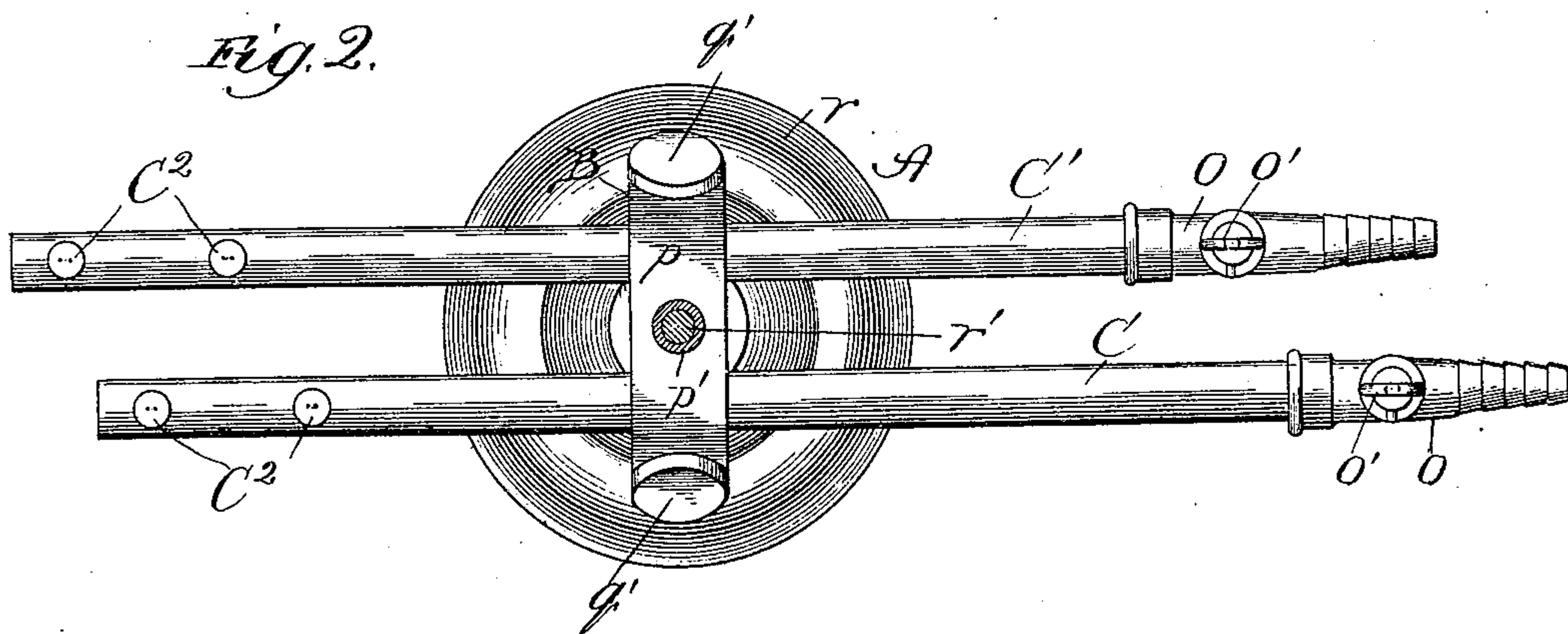
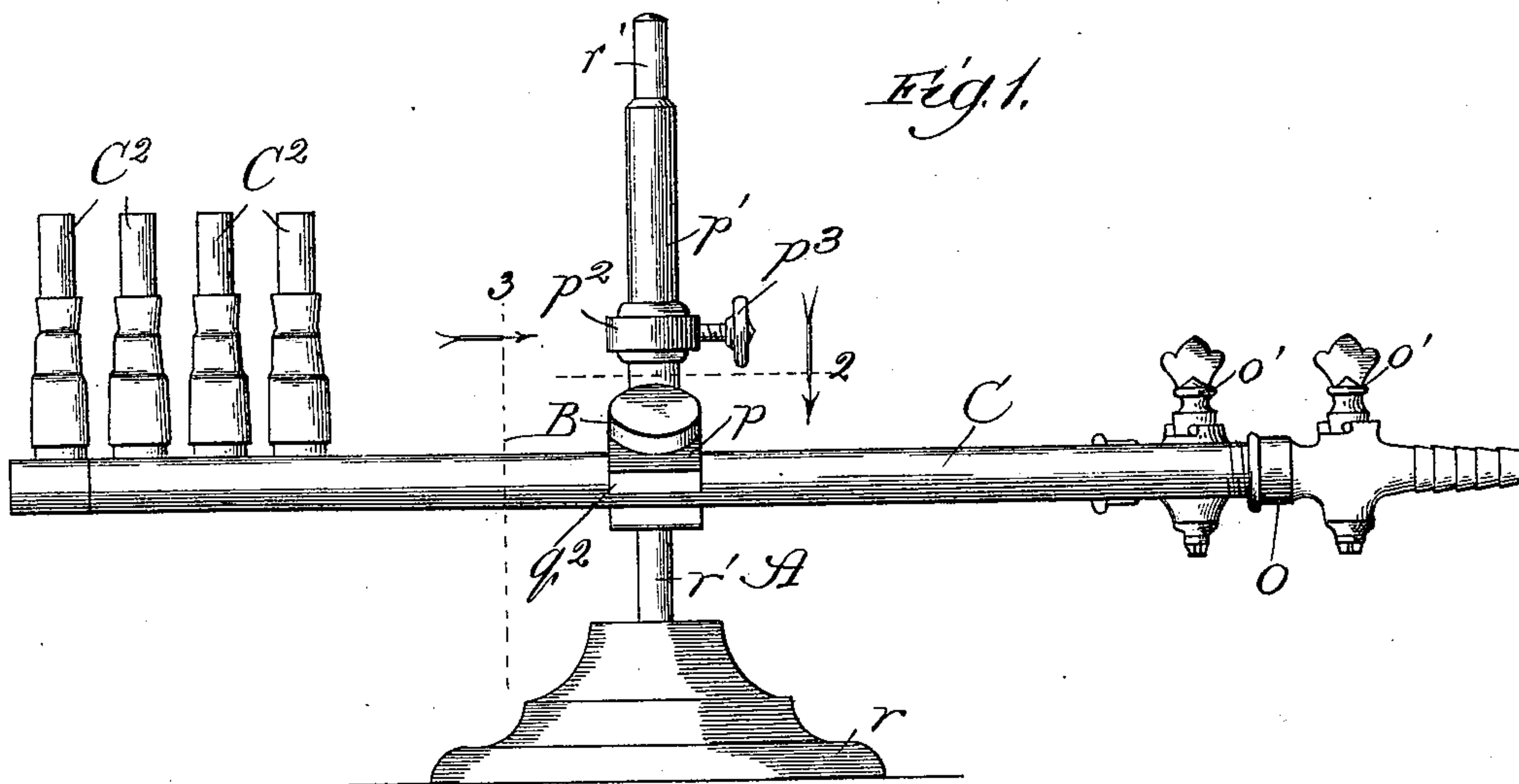
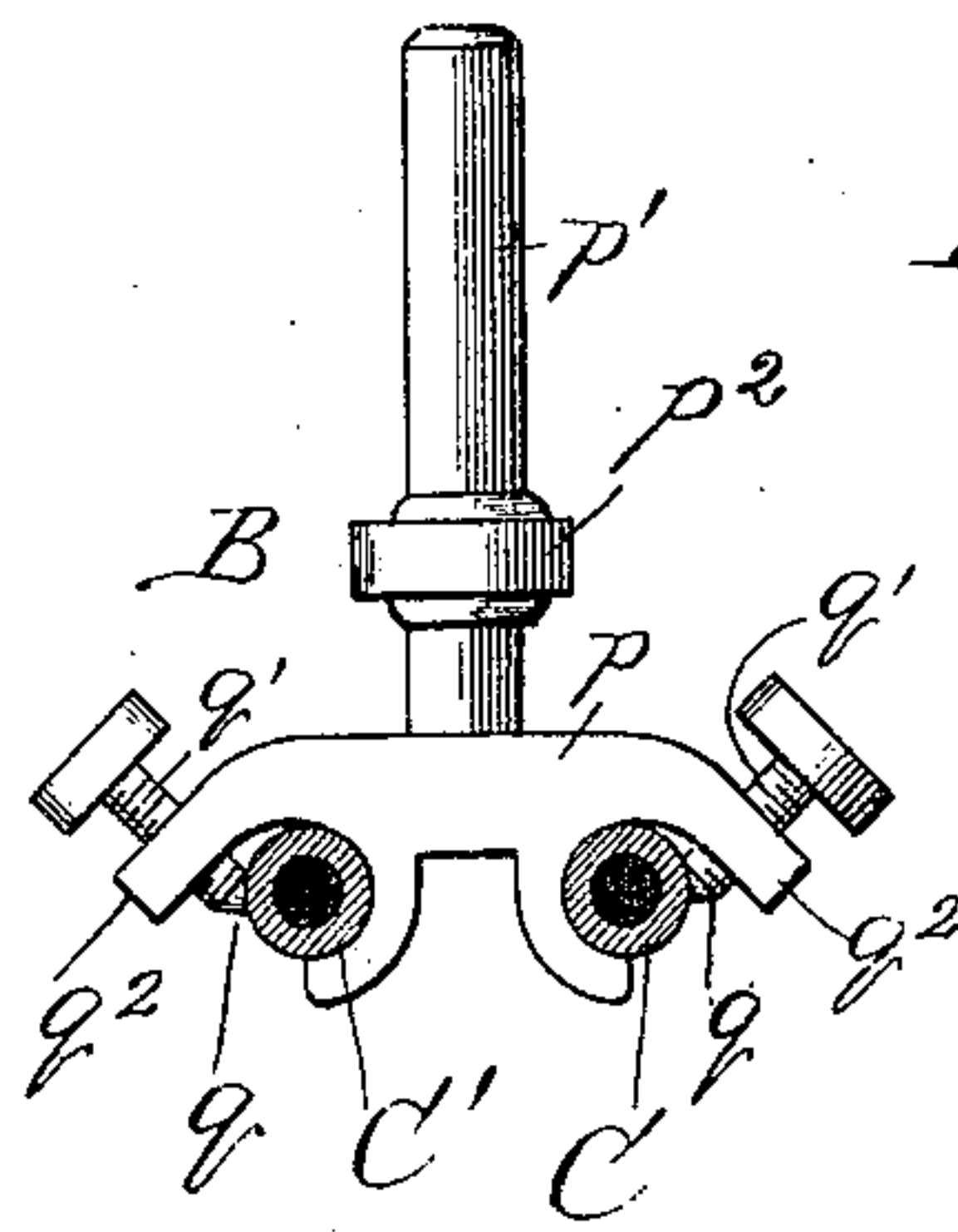
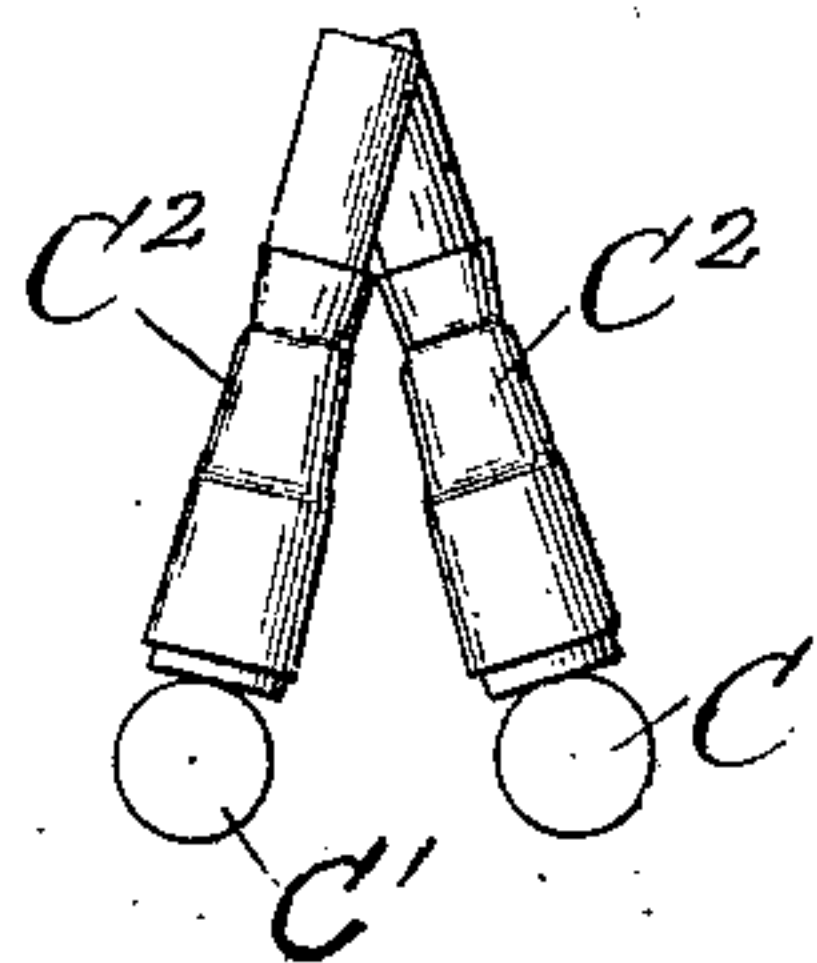


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY F. FULLER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WALMSLEY, FULLER & COMPANY, OF SAME PLACE.

BURNER APPARATUS FOR ACETYLENE GAS.

SPECIFICATION forming part of Letters Patent No. 566,902, dated September 1, 1896.

Application filed May 20, 1896. Serial No. 592,274. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. FULLER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Burner Apparatus for Acetylene Gas, of which the following is a specification.

The primary object of my invention is to provide an improved construction of burner apparatus adapting it to serve as a medium for the use of acetylene gas for the class of optical lanterns, though it is also the object of my invention to provide the improved construction of burner apparatus for this particular gas for use, generally, with illuminating and reflecting apparatus employed in projecting views.

Hitherto it has been common to use the oxygen light as best suited for the purpose of optical lanterns; but this light is objectionable, as being expensive, cumbersome, dangerous, and unreliable; and an oil-lamp is also used, but is undesirable, because it is dirty, hot, smoky, and vitiates the atmosphere. Acetylene gas, as an illuminant, used with a suitable burner has none of these objections and is especially desirable as a view-projecting agent by reason of the extreme brightness and steadiness of its light.

Referring to the accompanying drawings, Figure 1 shows my improved burner apparatus by a view in side elevation. Fig. 2 is a plan section taken at the line 2 on Fig. 1 and viewed in the direction of the arrow; Fig. 3, a section taken at the line 3 on Fig. 1 and viewed in the direction of the arrow, and Fig. 4 a view in end elevation of the pair of adjustable burner-carrying tubes.

A is a stand (shown as a base r) having a spindle r' extending upward from it.

B is a holder (shown as a cross-bar p) terminating at its opposite ends in open-sided sockets q , into which project set-screws q' in their bearings in the parts q^2 of the sockets, though any other suitable fastening means than set-screws may be substituted for them; and from the back or upper side of the cross-bar there extends the sleeve p' to surround loosely the spindle r' and having near its base an enlargement p^2 , at which is provided

a set-screw p^3 to fasten the holder at any position to which it may be raised or lowered on the spindle.

C and C' are tubes supported in the sockets q , wherein they are fastened by the set-screws q' and independently adjustable both lengthwise and on their axes, as well as being simultaneously adjustable to any desired elevation on the spindle r' by raising and lowering the cross-bar p thereon. At one end each tube is shown to have attached to it a coupling o at which to connect it with a supply-pipe of the gas and to contain a shut-off valve o' . At their opposite ends the tubes are closed, and near their closed ends they carry, to project at right angles from them, burners C², two being shown on each tube, though there may be more than two or only one on each.

The construction of the burner C² should be such as will adapt it to burn acetylene gas with a steady flame and without smoking, whatever the pressure of the gas or the lowness of the flame, though I do not limit my invention to any particular construction of the burner.

My improved construction permits four separate adjustments of the burners, namely, the longitudinal adjustment of each tube, the rotary adjustment thereof on its axis, the swinging adjustment of both tubes simultaneously by turning the holder B on the spindle, and their adjustment by elevating and lowering the holder on the spindle. The two last-named adjustments are for setting the burners with relation to the lens, the longitudinal adjustment is for regulating the relation to each other of the burners on the respective tubes, and the rotary adjustment is for regulating the proximity and relative positions of the burners on the respective tubes. Thus by sliding the tubes in their sockets, or either of them, the burners may be caused to coincide or to be brought out of alinement with or alternate with each other, and by turning the tubes in their sockets the burners may be adjusted toward and from the relative positions in which they are represented in Fig. 4, in which the light is more concentrated by bringing the several flames close together in alinement, while by sepa-

rating them from that position the light may be diffused.

Of course the number of the adjustable tube-carrying burners may be greater than two without departure from my invention.

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

1. In a burner apparatus, the combination of two or more tubes carrying burners extending at an angle from the body portions of the tubes, and a holder in which said tubes are supported and releasably fastened to be relatively adjustable independently of each other, substantially as described.

2. In a burner apparatus, the combination of two or more tubes carrying burners extending at an angle from the body portions of the tubes, and a holder in which said tubes are independently fastened and relatively adjustable longitudinally, substantially as described.

3. In a burner apparatus, the combination of two or more tubes carrying burners extending at an angle from the body portions of the tubes, and a holder in which said tubes are independently fastened and relatively adjustable rotatably on their axes, substantially as described.

4. In a burner apparatus, the combination of two or more tubes carrying burners extending at an angle from the body portions of the

tubes, and a holder in which said tubes are independently fastened and relatively adjustable both longitudinally and rotatably on their axes, substantially as described.

5. In a burner apparatus, the combination with a support, of a holder B thereon comprising a cross-bar p having sockets q in its opposite ends each provided with separate tube-fastening means, and tubes C and C' carrying burners C² extending at an angle from the body portions of the tubes and adjustably confined in said sockets, substantially as described.

6. A burner apparatus comprising, in combination, a stand A having a spindle r' extending from a base, a holder B comprising a sleeve p' surrounding said spindle to be vertically and rotatably adjustable thereon and provided with means for securing it in adjusted position, and a cross-bar p having sockets q in its opposite ends each provided with separate adjustable tube-fastening means, and tubes C and C' adjustably confined in said sockets and carrying burners C² extending at an angle from the body portions of the tubes, substantially as described.

HENRY F. FULLER.

In presence of—

J. H. LEE,

R. T. SPENCER.