

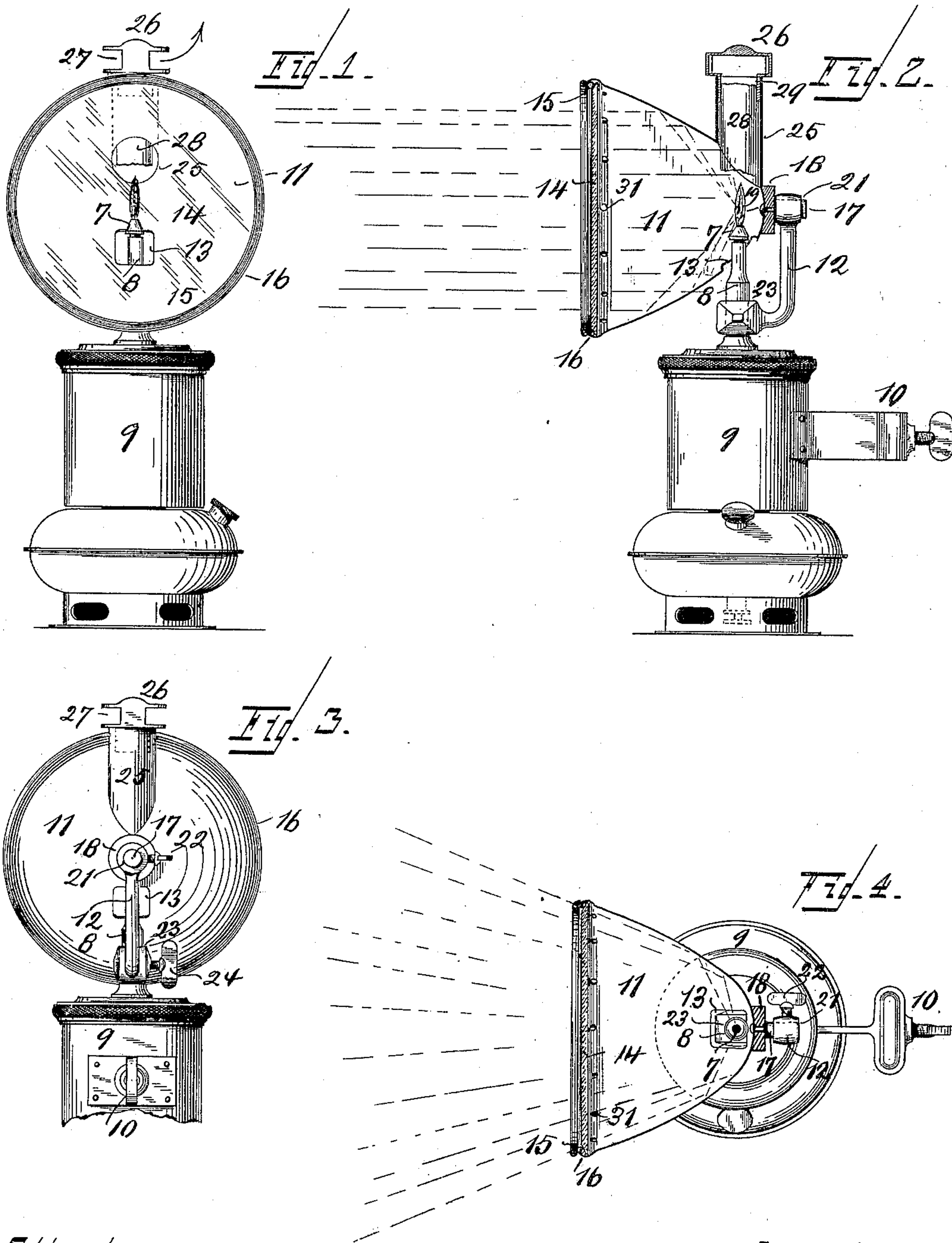
No. 652,298.

Patented June 26, 1900.

E. F. SMITH.
LAMP.

(Application filed Aug. 26, 1898.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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LAMP.

SPECIFICATION forming part of Letters Patent No. 652,298, dated June 26, 1900.

Application filed August 26, 1898. Serial No. 689,586. (No model.)

To all whom it may concern:

Be it known that I, EDWARD F. SMITH, a citizen of the United States, and a resident of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Lamps; and I do hereby declare the following to be a clear, full, 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, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form a part of this specification.

This invention relates to lamps, the main feature being the construction for supporting a reflector so that it becomes adjustable in certain ways with reference to the burner.

In the following specification, and particularly pointed out in the claims, is found a full description of the invention, its operation, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 is a front view of a reflector supported upon a suitable lamp, which latter is in this case supposed to be an acetylene-gas lamp combining a generator and burner in one and adapted to be used as a bicycle-lamp. Fig. 2 is a side elevation of Fig. 1 with the reflector in section. Fig. 3 is a rear view of Fig. 1; and Fig. 4 is a horizontal section through the reflector, showing the top of the lamp below it.

7 is the burner of the lamp, the illuminant—acetylene gas in this case—being supplied through neck 8, which latter is mounted on the body 9 of the lamp. This body in this case constitutes the generator which produces the acetylene gas. For attachment to a bicycle in case the lamp is so used connecting means 10 are provided.

11 is the reflector, preferably constructed on a true parabolic curve and supported on the neck 8 of the burner by means of a bracket 12. As material for this reflector sheet metal, plated and polished, is preferably used. The reflector surrounds the burner, which latter reaches into the former through an opening 13, so that, with the exception of those passing to the open front, all rays of the flame are subject to the direct action of the reflector. As is well known by reason of the

parabolic curve of the reflector any rays of light striking the same when proceeding from the flame while in the focal point of the curve will be reflected in a direction parallel to the axis of the reflector, so that with the latter so adjusted as to bring the flame within the focus of its curve a number of parallel rays forming a long, condensed, and penetrating beam of light, as shown in Fig. 2, will be emitted. On the other hand, if the reflector is adjusted to bring the flame slightly back of the focal point a number of shorter and diverging rays of light are thrown out, as shown in Fig. 4. No lens is to be used with this reflector, so that the reflected light is not influenced in any way except as it is directed by the parabolic curve of the reflector. To exclude the action of draft and wind, merely a plain glass window 14 is used, held in place by a spring-wire 15, lying in an annular groove 16, turned in the outer edge of the reflector. As before stated, the direction of the emitted rays of light may be effected in two ways as far as it is contemplated and accomplished by my invention and according to whether the flame is within or outside of the focal point of the curve. For such purpose the reflector is adjustably supported on its supporting-bracket, which latter in turn is again adjustably connected, so that adjustment in two directions, horizontally as well as vertically, but one independent from the other, is obtained. For the horizontal adjustment—that is, in the direction of the axis of the reflector, which adjustment forms at the same time the means for connecting the latter—a rearwardly-projecting pin 17, having a flange 18 for connection by solder or rivet or screw 19, is provided and fitted adjustably into an opening 21 at the upper end of bracket 12. It is held therein after adjustment to the proper position by a set-screw 22. For vertical adjustment—that is, at right angles to the axis of the reflector—a vertically-directed opening 23 is provided in the lower end portion of the bracket, which portion for such purpose is bent at right angles to the upper portion of the bracket. This opening 23 is fitted to receive the neck 8 of the burner, and the bracket is held thereon by means of a set-screw 24. As will be seen, by means of this double adjustment the reflector may be

adjusted to bring the flame either within or outside of its focus, and after primary adjustment of positions the same means may also be used to preserve these positions, since
 5 otherwise, by reason of changes in the size of the flame, the intended relation between flame and reflector might be disturbed.

The products of combustion are carried off by a flue 25, closed by a removable cap 26,
 10 having openings 27 in its side. To prevent corrosion and blackening of the upper surface of the reflector, a chimney 28, of transparent material, preferably mica, is used, which reaches partly into the space within the
 15 reflector, thereby preventing any of the products of combustion from coming in contact or forming deposits on the inner surface of the reflector, while at the same time its transparency prevents any interference with the
 20 reflected light. This mica chimney 28 is supported within flue 25 and secured to the inside of neck 29 of removable cap 26.

31 represents ventilation-openings in the reflector.

25 If this lamp and reflector is to be used in connection with a bicycle, the customary colored jewels, indicating right and left side, may be inserted into the sides of the reflector.

Having described my invention, I claim as
 30 new—

1. In a lamp the combination of a reflector, a burner extending within the same, and a bracket to which each of them is connected, the connection being independently adjustable in each case and the adjustments being
 35 in directions at right angles to each other.

2. In a lamp, the combination of a reflector, a bracket to which it is adjustably connected and a burner to which the bracket is adjust-
 40 ably connected, the two adjustments being at right angles to each other.

3. In a lamp, the combination of a burner, a reflector and a bracket to which each of them is adjustably connected, the adjustment being independent for each, so that the bracket
 45 and any one of the members connected thereto may be adjusted as a whole with reference to the other remaining member and independent therefrom.

4. In a lamp, the combination of a reflector,
 50 of a paraboloidal shape, having an opening 13 to admit a burner and a pin 17 extending rearwardly from its apex, a burner reaching with its upper part into the space within the reflector, an angular bracket 12 having in its
 55 ends, respectively a horizontally and vertically disposed opening, one opening fitted to receive pin 17 and the other fitted to receive the neck of the burner and means to hold in position the parts so fitted to each other the
 60 connection being in each case adjustable.

5. In a lamp, the combination of a burner, a reflector above it into which this burner extends, an opening in the upper part of the reflector opposite and above the burner, a flue
 65 25, starting upwardly from this opening and connected to the reflector, its upper end being closed by a cap 26, which is removably supported thereat and is provided with lateral openings in its side, and a chimney 28 of
 70 transparent material supported within flue 25, but extending below the lower edge thereof so as to reach partly into the space within the reflector, but terminating above the burner therein.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

EDWARD F. SMITH.

Witnesses:

C. SPENGEL,
 ARTHUR KLINE.