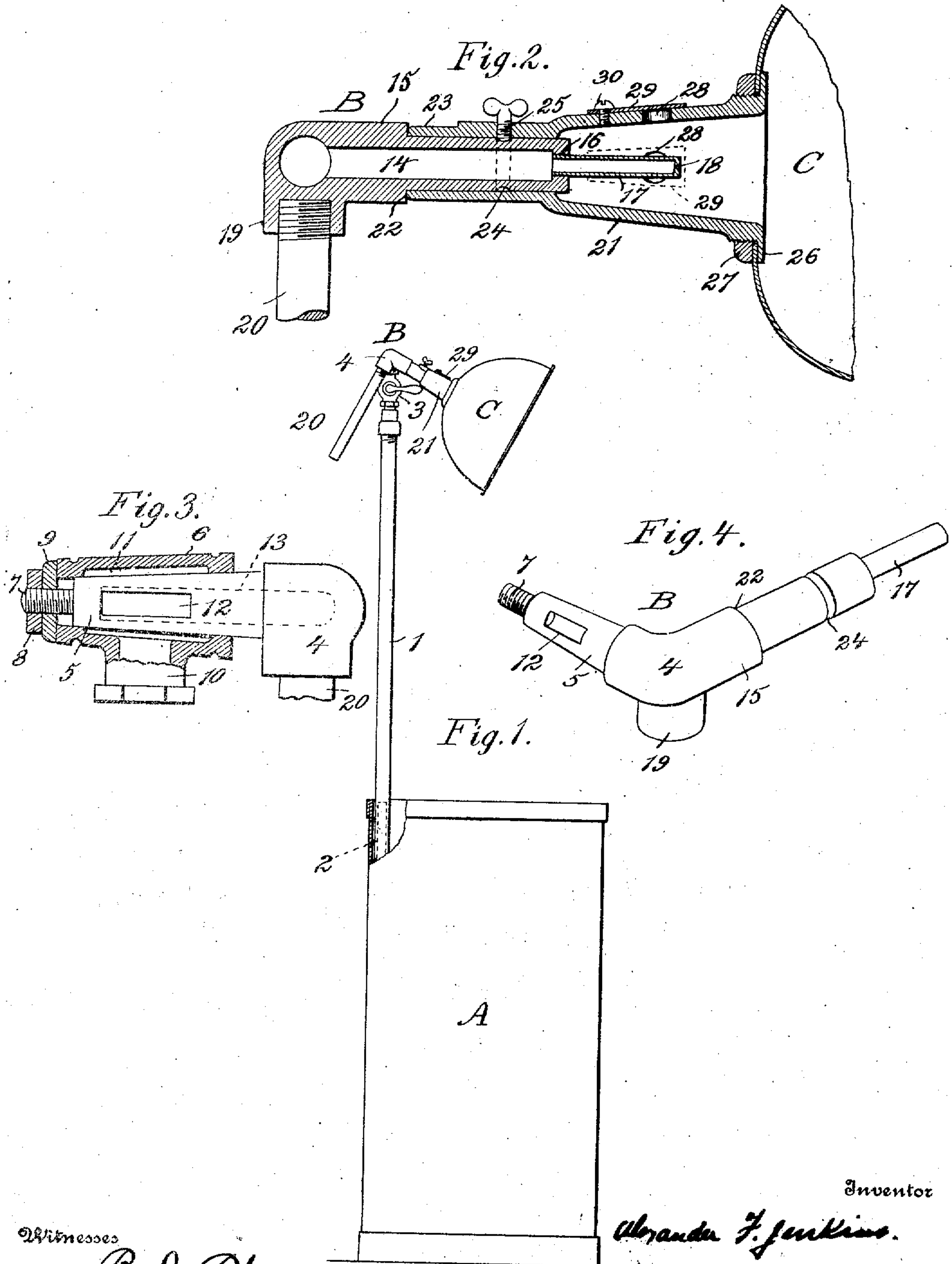


A. F. JENKINS.
CONTRACTOR'S TORCH.
APPLICATION FILED DEC. 23, 1908.

962,640.

Patented June 28, 1910.



Witnesses

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CONTRACTOR'S TORCH.

962,640.

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To all whom it may concern:

Be it known that I, ALEXANDER F. JENKINS, a subject of the King of Great Britain, residing at Baltimore city, State of Maryland, have invented certain new and useful Improvements in Contractors' Torches, of which the following is a specification.

This invention relates to a portable light designed for use by contractors and relates more particularly to improvements in the burner therefor.

The invention has for one of its objects to improve and simplify the construction and operation of apparatus of this character so as to be comparatively simple and inexpensive to manufacture, reliable and efficient in use, and so designed as to increase the brilliancy of the light.

Another object of the invention is to mount the burner upon a rotatable supply pipe mounted on the tank of the apparatus whereby the rays of light can be directed in any direction, the burner being adapted to swing on a horizontal pivot for throwing the light upwardly or downwardly, according to the position of the work with respect to the apparatus.

An additional object is to provide a thimble-shaped extension piece for supporting the reflector on the burner body at such a position in advance of the jet orifice of the burner nozzle as to bring the flame approximately at the focal center of the reflector, the said extension piece having a valve-controlled means for admitting air to the flame to insure efficient combustion.

With these objects in view and others, as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawing, which illustrates one embodiment of the invention, Figure 1 is a side view of a portable contractor's light equipped with the improved burner. Fig. 2 is a central longitudinal section of the burner. Fig. 3 is a detail sectional view of the pivotal connection between the burner and the standard or supply pipe. Fig. 4 is a perspective view of the burner.

Similar reference characters are employed

to designate corresponding parts throughout the views.

In the present instance, I have elected to illustrate the invention as applied to a contractor's light of the acetylene type, but it is to be understood that the improvements may be used with other types of torch lights.

Referring to the drawing, A designates the tank for the generator, such, for instance, as illustrated in my pending application Serial No. 372,972 filed May 10, 1907. The gas from the generator is supplied to the burner standard or outlet pipe 1 by a vertically-disposed pipe 2 fixed in the tank to serve as an axis on which the burner standard 1 can rotate for the purpose of throwing the rays of light in any direction. On the upper end of the pipe is attached a burner B that carries a parabolic reflector C for concentrating the rays of light upon a given point. The burner standard or pipe 1 is equipped with a cut-off valve 3 for controlling the supply of gas to the burner.

The burner B, as shown in Fig. 4, comprises an L-shaped body 4 which has the arm 5 formed into a tapering or wedge-shaped pivot that is horizontally disposed and turns in a socket piece 6 arranged on the upper end of the burner standard 1. The pivot 5 has a threaded stud portion 7 for receiving a nut 8 for holding the pivot in the socket piece, there being a washer 9 inserted between the nut and the adjacent end of the socket piece. The socket piece is formed with a boss 10 for connection with the valve 3 and this boss constitutes an inlet for admitting gas to the chamber 11 that communicates through the port 12 with the bore 13 of the pivot 5. This bore 13 communicates with the bore or hollow 14 of the other arm 15 of the burner body, the outer end of the arm 15 being provided with a threaded opening 16 for receiving the tubular burner tip or nozzle 17 which has a fine jet orifice 18 through which the gas is discharged to produce a pencil-shaped or elongated flame. The burner body is provided at its elbow with an interiorly threaded boss 19 for receiving a handle 20 whereby the burner may be swung upwardly or downwardly on its horizontal pivot 5 or turned on the outlet pipe 2 for throwing the flame or rays of light in any direction.

The parabolic reflector C is detachably

mounted on the arm 15 of the burner by a thimble-shaped extension piece 21 which telescopes over the extremity of the arm 15 in such relation to the burner tip that the axis of the reflector will coincide with the axis of the pencil-shaped flame, the said arm being reduced to provide a shoulder 22 against which the inner tubular end 23 of the extension piece 21 bears. The reduced portion of the arm 15 has an annular groove 24 into which extends the inner end of the set screw 25 arranged on the extension piece 21, whereby the set screw locks the reflector on the burner. The outer end of the extension piece or reflector support 21 has an annular flange 26 against which the reflector is clamped by a ring 27 that is threaded on the extension piece, the reflector being provided with a central opening for receiving the said extension piece. The extension piece between the end of the arm 15 and reflector expands slightly to provide ample space around the burner tip and to this space air is admitted through one or more inlet openings or ports 28 which are controlled by plate valves 29 secured in place on the member 21 by screws 30 which constitute pivots for the valves. These valves can be set to admit the requisite amount of air for insuring efficient combustion of the gas to obtain the maximum brilliancy. It is to be noted that the jet orifice 18 is set considerably behind the reflector so that the resulting flame will closely approximate the focal center of the reflector.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described the invention, what I claim is:—

1. A contractor's torch light comprising a tank, an outlet pipe supported in upright position thereon to form a burner standard and mounted to turn on a vertical axis, a burner attached to the upper end of the standard and mounted to swing on a horizontal axis, said burner having a jet orifice, a reflector, and means for mounting the reflector on the burner with the jet orifice of the latter behind the reflector.

2. A contractor's torch light comprising a portable tank having a fixed upright pipe discharging gas, and a freely removable and freely rotatable burner attachment applied

to the said pipe, said attachment consisting as a unitary structure of the following; a pipe standard slidable on and off and rotatable around the fixed pipe and receiving gas therefrom, a burner body mounted on the standard to move therewith and movable independently thereof on a horizontal axis, a burner tip secured to the said body, a reflector having an opening through which the flame is projected from the tip, and a device separate from both the reflector and burner body for securing and supporting the former on the latter.

3. A burner attachment for contractors' lights comprising a straight pipe standard open at its lower end, a burner body pivotally mounted on the upper end of the standard to swing on a horizontal axis and constructed to receive gas therefrom, said burner body having a jet orifice arranged to deliver a horizontal flame, a reflector disposed in front of the jet orifice and having an opening to receive the flame, a device supporting the reflector on the burner body and slidable longitudinally on and off the latter, and clamping means on the said device releasably engaging the burner body to hold the device in position.

4. In a contractor's light, the combination of an L-shaped burner body having one arm formed into a horizontal hollow pivot, a vertical gas conducting pipe forming a burner standard on which the pivot is mounted, said standard being open at its lower end to loosely fit over a gas discharging pipe and having its upper end communicating with the pivot, a burner tip connected with the other arm of the burner body, and a reflector supported on the burner body with the burner tip behind the reflector and at the convex side thereof to direct the flame through the focal center of the reflector.

5. In a contractor's light, the combination of a burner standard, a burner body pivotally mounted thereon and communicating therewith, a handle for adjusting the burner body, a reflector, an extension piece for supporting the reflector on the burner body, and means for admitting air to the flame from a point behind the reflector through the extension piece.

6. The combination of a reflector, a tubular extension piece connected therewith and extending rearwardly therefrom, means for attaching the extension piece to a burner body, and controllable means for admitting air to the flame through the extension piece.

7. The combination of a burner body having a threaded opening, a burner tip screwed in the opening, an extension piece detachably connected to the burner body and extending forwardly beyond and surrounding the said tip, a reflector, and means for clamping the reflector on the extension piece with the burner tip exterior to the reflector.

8. The combination of a reflector having an opening, a tubular extension piece projecting from the rear side of the reflector with its axis alining with that of the latter, said extension piece having air-admitting means located behind the reflector to permit air to be supplied to the flame through the extension piece, means for securing the extension piece to the reflector at the opening thereof, and a burner body extending into the extension piece and having a jet orifice located in the extension piece for projecting a flame out of the latter and into the reflector.

9. As a new article of manufacture, an extension piece for connecting a reflector to and in front of a burner, said piece consisting of a unitary structure including means at one end for detachably connecting the reflector thereto, means at the opposite end for detachable connection with the burner, a device on the last-mentioned end for clamping the said piece to the burner, and air-admitting means arranged intermediate the ends of the said piece.

10. The combination of a rotatable pipe standard, a valve therein, a socket on the standard, a pivot in the socket having its axis transverse to the standard, a burner body carried by the pivot to swing in a plane at one side of the standard and communicating with the latter through the pivot, a reflector carried by the burner body, and a handle on the burner body for swinging the same, with an upright gas supply pipe extending into the pipe standard and forming an axis on which the latter rotates.

11. The combination of a pipe standard, a burner body carried by and movably mounted on the upper end of the standard, said body having a smooth reduced portion provided with an external groove, a tip on the burner body having a jet orifice, a reflector supported wholly in front of the tip and having an opening in line with the jet orifice through which the flame enters the reflector, an extension piece on the reflector at the rear thereof having a hollow rear end slidably

fitted on the reduced portion of the burner, and a fastening on the extension piece arranged to engage in the said groove to hold the extension piece on the burner body.

12. A reflector having an opening, an extension piece having its front end secured to the reflector at the opening and having a burner embracing means at its rear end, and a set screw on the rear end of the said piece for clamping the latter to the burner, in combination with a burner having a smooth portion to fit into the said means and provided with a groove into which the screw engages for holding the extension piece connected with the burner.

13. A reflector having an opening, an extension piece having a flanged front end extending from the rear into the opening with the flange bearing on the internal surface of the reflector, a clamping ring on the said piece engaging the external surface of the reflector, and means on the rear end of the said piece for connecting the same with a burner.

14. A reflector extension piece having an external flange at one end and externally threaded behind the flange, a ring engaging the threaded portion of the said piece for clamping a reflector against the flange, and means at the opposite end of the extension piece for connecting the latter to a burner.

15. A reflector having an opening, an extension piece located rearwardly of the reflector and connected with the same at the said opening, the rear end of the extension piece being hollow and provided with a smooth bore, a burner body having a smooth portion embraced by and on and off which slides the said hollow end of the extension piece, and means for clamping the extension piece on the burner body.

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

ALEXANDER F. JENKINS.

Witnesses:

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