

The 'Maine Lighting Company' Patented 'Controllable' Acetylene Dip System Bucket Lamp

by Mick Corbridge

In Henry Pohn's book - 'Mine Flame Lights', on page 583 is a sketch of a unnamed bucket lamp referred to as 'a iron tank carbide lamp'. This lamp was manufactured around the early 1940's, by 'The Maine Lighting Co.' - England. This style of lamp is normally referred to as a 'dip system bucket lamp' as the internally supported carbide container is dropped or 'dipped' into the water which is contained in the outer 'bucket' container. **Fig. 1** shows the component parts of this style of lamp. The carbide is held in the center shown cylinder, which in turn is fitted inside the gas reservoir section having the conical top & jet outlet stem. These combined cylinders are then slotted into the central tube of the water bucket. The carbide container is drilled with a very fine hole, (this can just be seen on **Fig. 1** which allows a slow feed of water onto the carbide to produce the required gas generation.

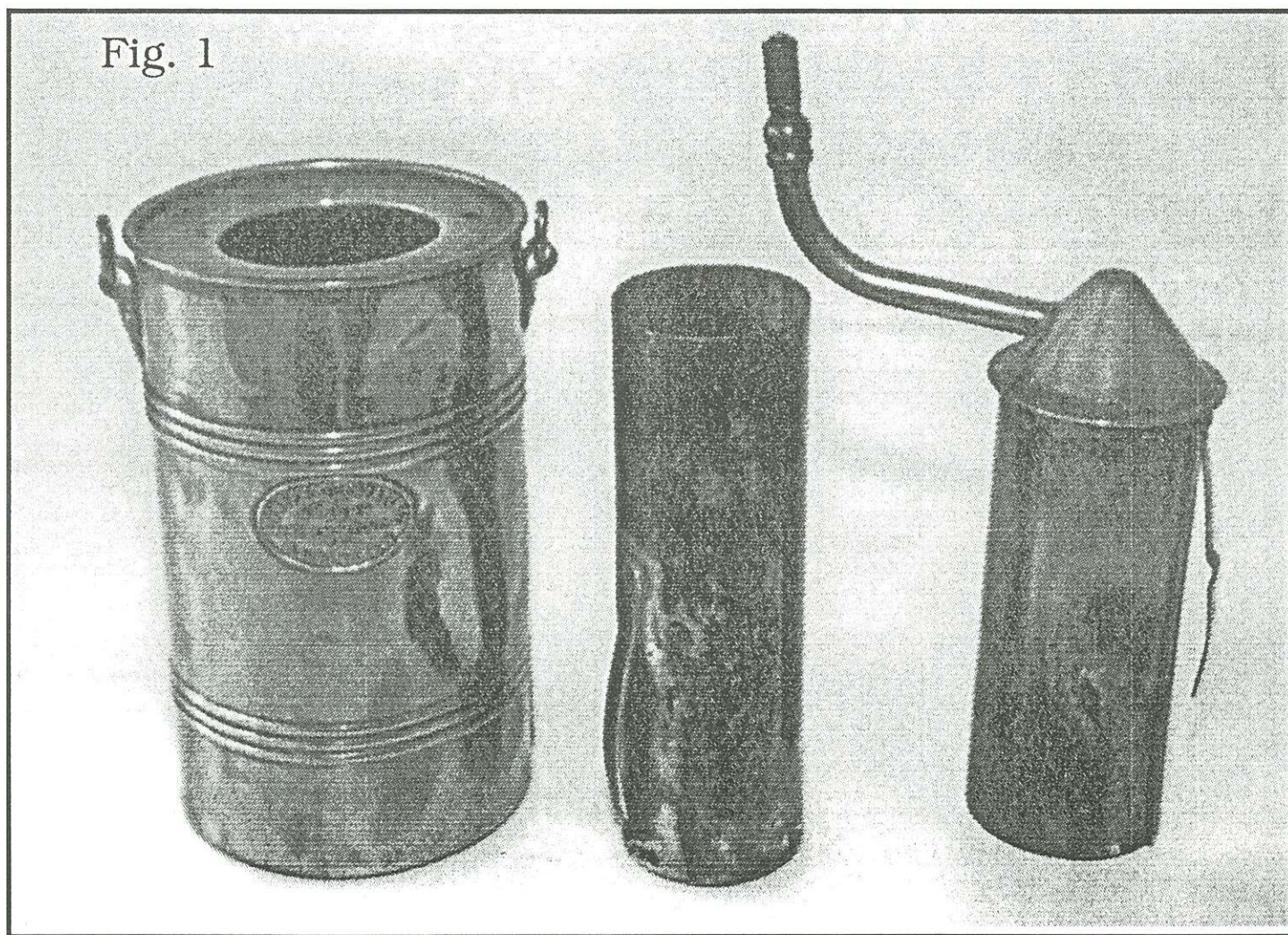
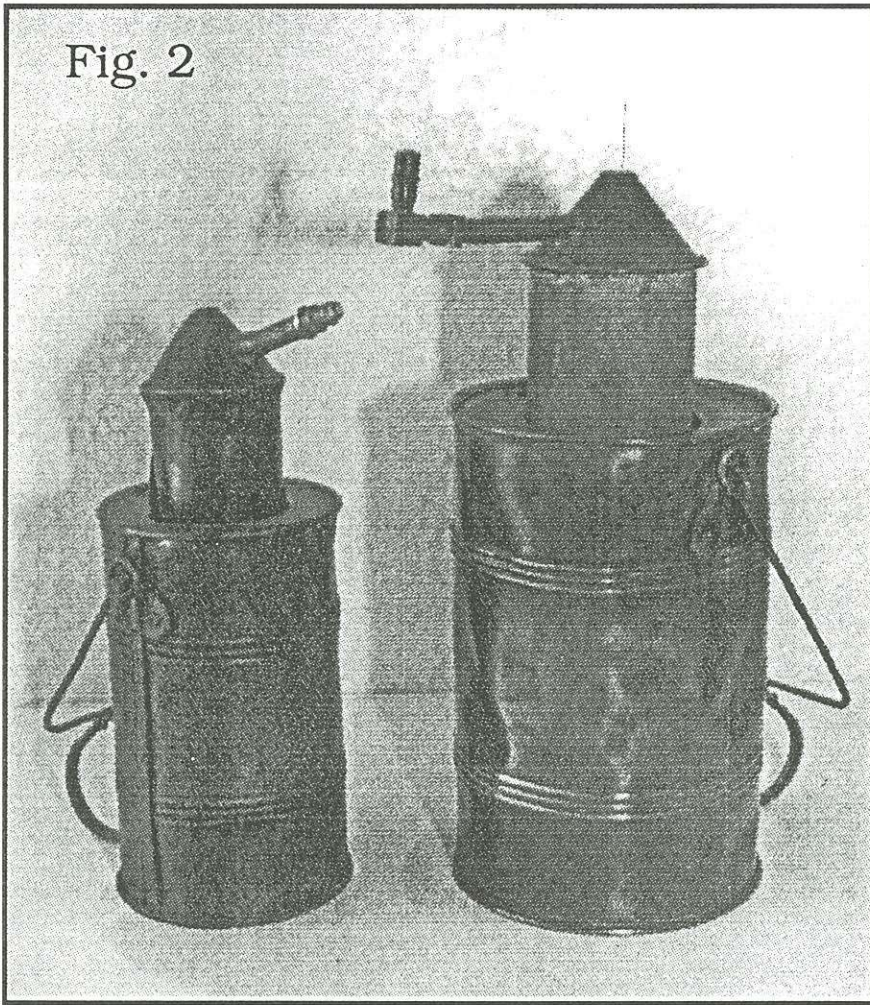


Fig. 2



Several other early carbide lamp manufacturers used this basic system of lamp operation, but all designs previous to the 'Maine' patent had the disadvantage that once dipped, the lamp remained on until the lamp was dismantled: also no control of gas pressure was possible & so flame size was not stable. With the 'Maine' lamp, the designer named 'Shepherd' added a very simple friction spring that could either hold the carbide chamber hole above the water, or it could be adjusted to a position where the hole was 'dipped' below the water level & hence produced gas generation. This spring device can also be seen **Fig.1**. This patented lamp, (Pat. No. 8999), gave the advantage in that gas generation could be somewhat crudely controlled by lifting or lowering the carbide container which was held in position by the friction spring; also the lamp could

be temporarily extinguished without having to dismantle the lamp.

The earliest examples- of this lamp were made when the company was based in Blackpool - England, & many lamps then produced were not fitted with company logo badges although some do exist from this period of manufacture.

Fig. 2 shows two lamps from this period, one been of metal & of the small pattern size, (with a bucket height of around 160 mm), & the other example been of all brass manufacture & of the middle sized pattern, (bucket height 195 mm).

It then appears that the company's main factory moved to nearby Burnley & it is from here that the majority of Maines lamps were manufactured. Now it appears that from

Fig. 3

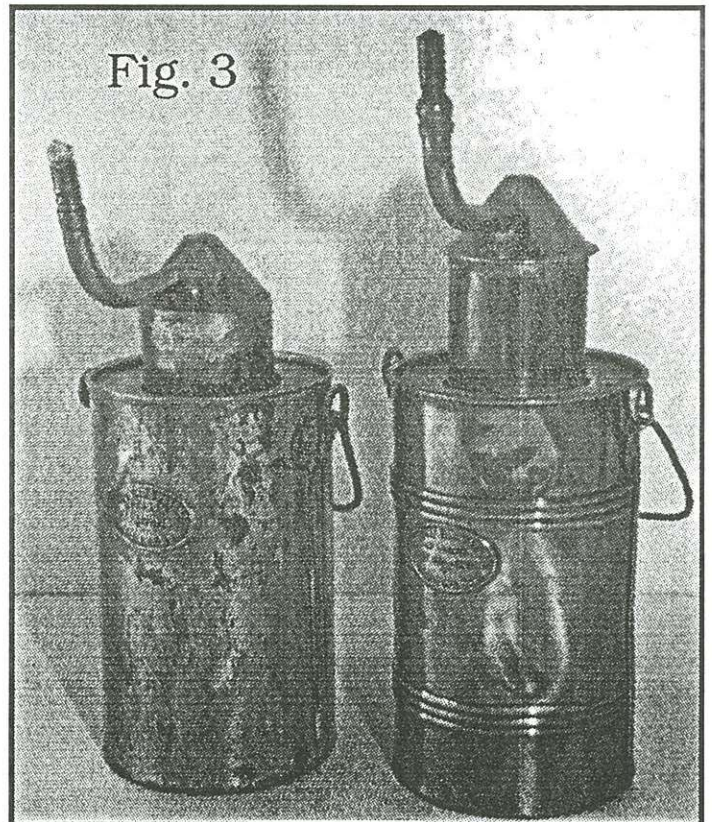


Fig. 4



Burnley, all lamps were supplied having the oval embossed brass manufacturers badge fitted on the front of the bucket, this gave the manufacturers name & address with 'Shepherds Patent No. 8999'. **Fig. 3** shows a mainly metal, and an all brass version of lamps from this factory, both of the small pattern size.

'Maine Lighting' then either moved again, or acquired a further base in Newcastle-upon-Tyne on the eastern side of the country. **Fig. 4** show examples of lamps supplied from this base, & the badges show the new base town along with a partial address of

43A Side ? This photo shows a unusual small pattern lamp with a vertical jet stem exiting from the center top, and the body having a combined handle/bracket on the side. The other lamp shown is of the large pattern size where the bucket height is the same as the medium size lamp, but each section is of a much larger diameter; this lamp size has a metal supporting base ring for extra strength & protection.

This larger pattern lamp design was later acquired under the same Shepherds patent No. 8999 by the firm 'Leading Light Syndicate' of Hull - Yorkshire - England. They modified the design to incorporate a reflector which was held by a substantially cast brass sliding bracket; **Fig. 5** shows a example of this lamp and also shows the larger brass oval embossed badge of this company.



Fig. 5

The lamp patterns described above were designed for industrial & mining use, but a further pattern was developed for general lighting. This variant had two jet stems & burners. **Fig. 6** shows the small and mid-size lamps with this variation; the badge on the larger one has been added later and is 'J. E. Draper - Poultry Appliance Maker Blackburn', it probably replaced the removed Maine badge and it is almost certain that the lamps were manufactured by Maine when at nearby Burnley. The ring on the bucket top of the small lamp is a dip-stick to allow checking of water level.

I have seen Maine lamps with the badge showing 'Maine of Edinborough', and so it appears that some form of base also existed in Scotland.

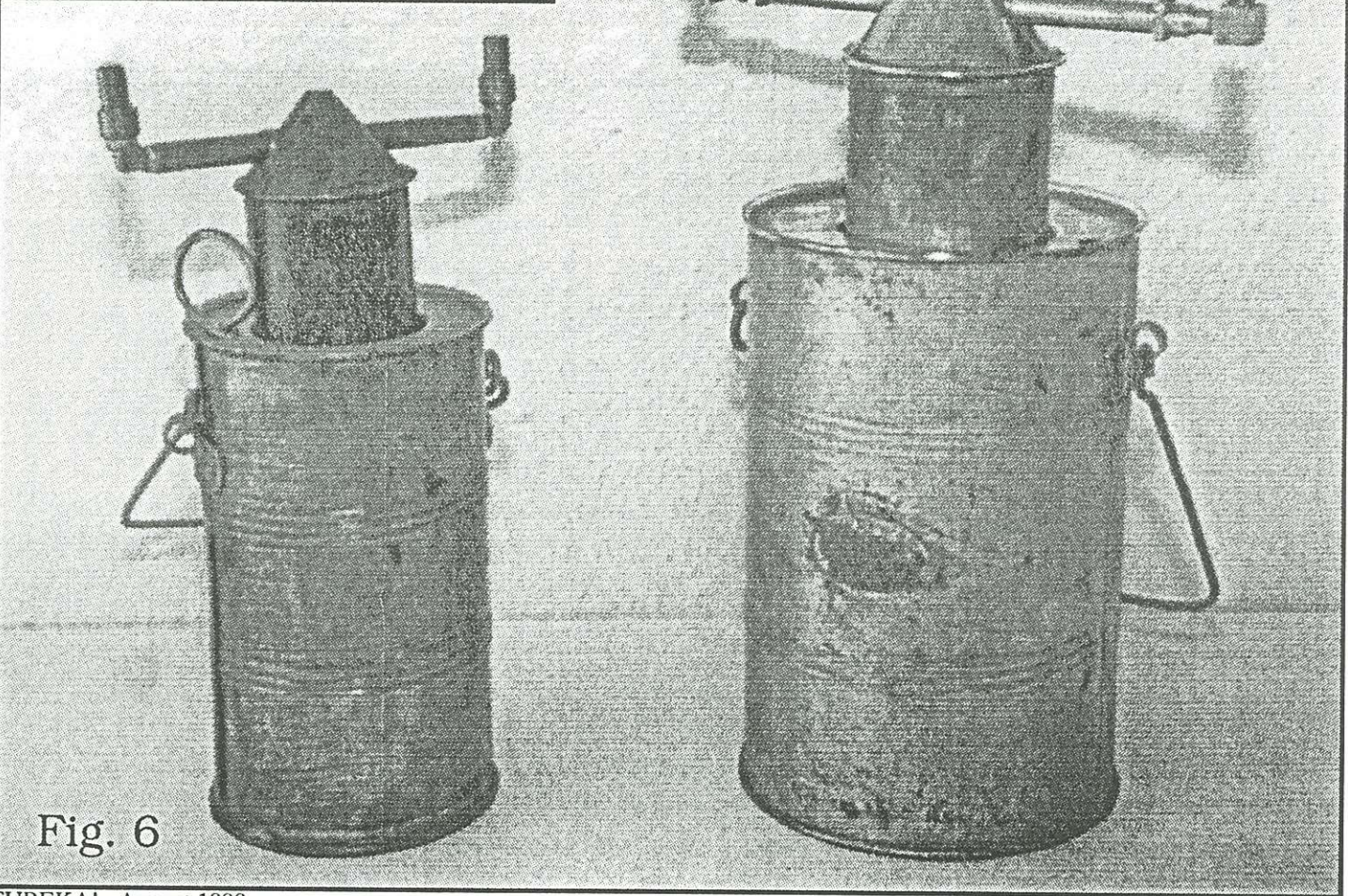


Fig. 6