

ACE

FOUNDRY COMPANY

MANUFACTURERS & FOUNDERS OF METALS

353-363 NO. LAMON AVE., CHICAGO 60644

TELEPHONE MANSfield 6-0227-0228

May 25, 1976

Dale Grice
529 - 48th Street
Des Moines, Iowa 50312

Re: June 1976 Railroad Magazine
Information Booth
Mars Signal Lights

Dear Sir:

Regarding your inquiry in the above magazine, the original "Mars Light", Burlington Installations were a "figure eight" light pattern. "Mars" had a design patent on the "figure eight" light pattern.

The original Burlington installations were made under the direction of Henry Urbach, Supt. of Motive Power, at Aurora, Illinois, on #9900 and the Minneapolis Zephers, all "flat front" non-nose locomotives - over roof head light installations.

All Mars Lights, at that time, were designed to use the "figure eight".





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However, in the event, the worm-gear housing was taken apart and re-assembled, so that the gearing was not assembled correctly, as designed, a different light pattern would result, not a "figure eight".

(A) Also, if the gear timing were assembled correctly and the outside rotary driving arms were assembled incorrectly, a "non-figure eight" would result.

(B) The motor (worm drive) made contact between two gears, one gear two times the diameter of the second gear, one gear each side of the worm.

(C) If the gear box is assembled correctly, the reflector dipped two time vertically as the reflector crossed one time horizontally, thereby creating a "figure eight".

(D) In the event that the gears or outside arms that "drove" the reflector were incorrectly assembled, other light patterns would result. Such as; an inverted "P" or "C", as well as a number of indescribable light patterns.





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The above conditions could be the explanation of a questionable light pattern observed by your questions in Railroad.

My interest in your question is based on the fact that I am the original designer of the Mars Locomotive Signal Light (1936-1940) and your interest brings back "old memories".

The original signal light was installed on the original "400" C&NW, Engine 2908 (steam), 6 May 1937, Chicago to Milwaukee.

The original Diesel installation was on the Rock Island Rocket #604, Minneapolis to Kansas City. Later, all six "Rockets" were equipt under the direction of John Farrington, approximately 1938-1939. The Burlington followed the Rock Island.





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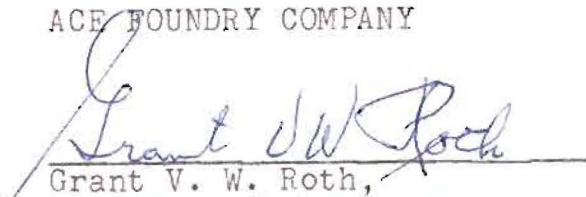
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I am a constant reader of "Railroad" and therefore, interested in your question and trust my comments will answer your questions regarding Mars Signal Lights.

Yours very truly

ACE FOUNDRY COMPANY



Grant V. W. Roth,
Chairman of the Board

GVWR/sjm

