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Notes in Regard to Efficiencies of Luminous Flames

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NOTES IN REGARD TO EFFICIENCIES OF LUMINOUS
FLAMES.

BY G. W. STEWART.

(Abstract.)

An investigation of the efficiency of luminous flames would be of interest. Results obtained incidentally were studied, showing that a cylindrical acetylene flame is not so efficient as a flat acetylene flame when judged by the proportion of its radiant energy that is visible. The amount of visible radiant energy that a given quantity is able to furnish should also be considered. Experiments with a flat kerosene flame show a height of flame at which the candle-power-hours-per-gram is a maximum. The problem of obtaining the most efficient flame, in the broadest sense, is complex. It is advisable to get the temperature of the incandescent particles as high as possible, and also to get as many of them per gram of the illuminant as possible. Both of these factors depend upon the shape of the flame.