

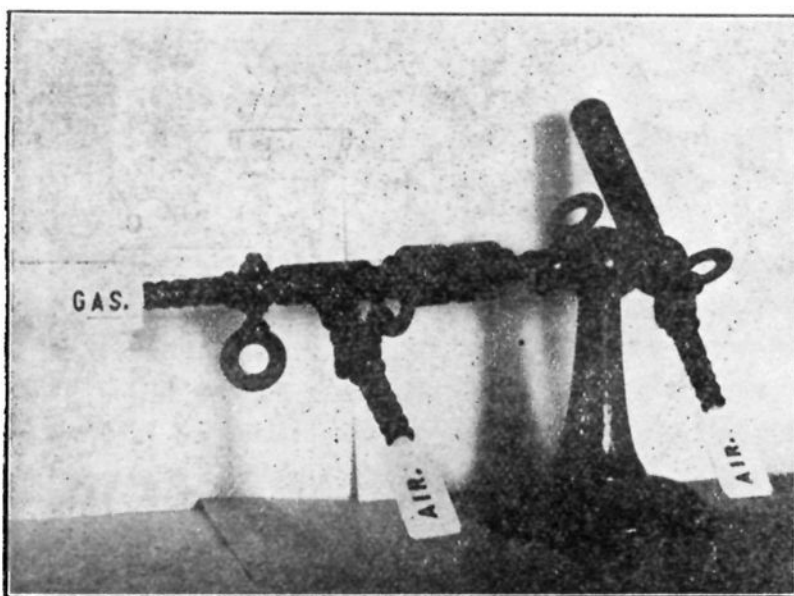
separately connected with tube B or C, or B and C may be themselves connected. If, when tubes B and C are connected, a hole is drilled from A to the center, the stopcock will operate as a multiple way stopcock connecting either B or C, or both, to A. The dimensions of this stopcock are given in Table VI.

In conclusion, the authors wish to thank Professor G. N. Lewis and Mr. G. H. Fosdick for their kind suggestions.

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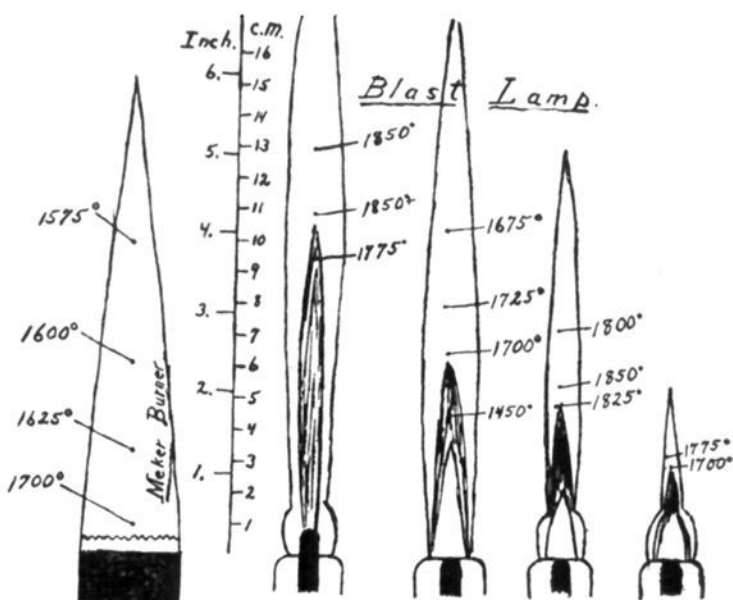
NOTES.

Blast-Lamp for Natural Gas.—The common blast-lamp may be rendered suitable for natural gas by connecting a T-tube to the gas inlet,



so that sufficient air may be introduced with the gas to give a blue flame before blowing air through the regular air nozzle. For thorough mixing of the gases a small mixing chamber is desirable. The illustration shows a lamp so modified, that has been in operation in this laboratory for almost a year, being used by students for

working glass as well as for heating crucibles. Flames of all sizes are secured almost as easily as with coal gas. Copper gauze was placed in the burner tube to prevent "flashing back," but later this precaution was abandoned, as our gas can not be made to "strike back" in any burner. A small thermocouple gave the flame temperatures indicated in the diagram.



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