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**Creators:** Chancellor, David B.

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#### INSIDE FROSTED LIGHT BULBS

Since the brightness of the filaments of the incandescent lamp is harmful to the eye, the newest development in the lamp industry has been to frost the glass bulb. The outside frosted bulb, which has been made for some time, is considered unsatisfactory because it is wasteful of light and because it collects a great deal of dust which can not be wiped off.

For some time engineers have been attempting to produce an inside frosted bulb, but all attempts, until recently, have failed because of the fact that glass frosted on the inside became so brittle as to break at slight pressure. Marvin Pipkin, of the General Electric Company, has invented a process which overcomes this difficulty.

The bulb is first etched by a strong acid solution on the inside. This leaves an inside surface made up of many irregular sharp angles. So far, the process is like that of former attempts, the glass being left very weak and easily shattered. But Mr. Pipkin found that the glass could be strengthened by the application of another acid weaker than the first. This second application rounds off the sharp edges, leaving the glass nearly as strong as it was originally.

It has been found that an electric light bulb frosted on the inside by this process is only two per cent less efficient than a clear lamp, and is a great deal more efficient than a lamp frosted on the outside.

DAVID B. CHANCELLOR, '30.



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