



HINTS TO CORRESPONDENTS. Names and Address must accompany all letters or no attention will be paid thereto.

(8903) C. A. B. asks for the chemical analysis of the so-called oil gas, that is, gas manufactured by the Patton or similar process.

Table with 3 columns: Specific gravity, Per Cent., Per Cent. Rows include Heavy hydrocarbon, Methane, Hydrogen, Carbon monoxide, Carbon dioxide, Oxygen, Nitrogen, Sulphur compounds.

The best book is Walter Hempel's "Methods of Gas Analysis," third edition, translated by L. M. Dennis.

(8904) F. G. B. asks what kind of driers can be used with tar paint to dry it in about two days and not affect glass and not crack.

(8905) F. K. S. asks for a formula of an aquarium cement for putting in glass. A. Melt together at a gentle heat 3 parts of linseed oil, 4 parts of tar and 16 parts of resin.

(8906) O. H. asks where the earth's center of gravity is. Supposing that a shaft goes through the earth's center, and a ball drops into it, where will the ball stop?

(8907) W. R. M. asks how to unite broken pieces of gold, silver or bronze articles with what the jewelers call hard solder.

(8908) J. R. C. asks what book he should buy to get the receipt for putting designs, etc., on glass, such as a photograph or a scene of any kind.

of vitriol, 100 parts ammonium fluoride and 100 parts of water. 3. Stir 1 part of oil of vitriol into 4 parts of water and allow to cool; then stir in enough finely powdered fluorspar to the consistency of milk.

(8909) D. P. S. asks for some chemical for etching the name or initials on such tools as calipers, scales, and squares, as through stamping they are generally sprung out of shape?

(8910) W. B. writes: Cayenne pepper put into rat-holes will at once clear premises of them. I have tried it in numbers of instances, and never knew it to fail.

(8911) C. E. H. asks: Kindly let me know what a slot magnet is, and also what is meant by compound winding.

(8912) D. O. asks: What is Cornish stone, and what kind of soda, that is, crystal of soda, to use in the glazes in the "Cyclopedia of Receipts," as I am working on them;

(8913) W. A. P. asks: 1. The best way to reduce a 220-volt circuit down to 110 volts, 15 amperes, capacity. A. You wish 15 amperes to flow with a drop of 110 volts in a 220-volt circuit.

(8914) B. B. asks: 1. How to avoid scratches on the glass when cleaning with ashes before silvering? A. If you would avoid scratches on glass, you should avoid the use of ashes in polishing it.

(8915) W. G. asks: Could you suggest anything that I could mix with coal dust so it could be used for family use? A. Coal dust is briquetted by mixing with coal tar or pitch, subjecting to strong pressure, and usually partially coking after pressure.

INDEX OF INVENTIONS For which Letters Patent of the United States were Issued for the Week Ending

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