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## Notes and Queries.

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(8581) A. C. asks for a recipe to take an instantaneous picture similar to a tintype upon surface of a sea shell. What chemicals, etc., are required for the purpose? A. The surface of the shell must be coated with a sizing and then sensitized. You can obtain the materials and chemicals from any dealer in photo materials.

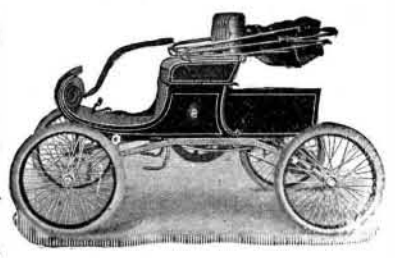
(8582) J. S. B. asks: In your issue for February 22, on page 124, you have an article on hydrate of potassium. You say that it burned in oxygen, forming potassium hydrate and water: then this equation would be true:  $KH + 2O = KOH + H_2O$ , which cannot be balanced. Can you make this clear? A. If the formula for potassium hydride is KH and it were burned in O, the product would be at first  $K_2O$ , potassium oxide. Upon cooling this would combine with water, which would be formed and yield KOH. This is the reaction:  $2KH + O_2 = K_2O + H_2O$ ; and  $K_2O + H_2O$  becomes  $2KOH$ . Chemists think that hydrogen does not form definite compounds with the alkaline metals.

(8583) A. B. McK. asks: Will you kindly give me what information you can on the following subject? Take a piece of steel and cut in two pieces. Make one as soft as possible and the other as hard as possible; now, what will be the difference in resistance in ohms, if any? A. Barus and Strouhal give the specific resistance of glass-hard steel as 45.7 and of soft steel at the same temperature as 15.9. This is the resistance in thousandths ohms of a bar one square centimeter in cross section.

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