482,403 482,396

Business and Personal.

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References to former articles or answers should give date of paper and page or number of question.

Inquirles not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn.

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personal rather than general interest cannot be expected without remuneration.

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Minerals sent for examination should be distinctly

(4532) W. J. P. asks: 1. Suppose a horse shoe steel magnet were substituted for the core of an electromagnet and a current of electricity wer sent through the wire with which it was wound, would there be any limit to the strength which the magnet would attain? A. In this case a permanent magnet will becomestronger if the current is sent in a direction to favor the magnetism. On the other hand, it would be weaker if a current were sent in the opposite direction. and in all probability the polarity of the permanent magnet would be reversed. 2. Explain how four messages can be sent over one wire at the same time This quary connot be encuered in the encu command. You will find it described at length in Prescott's "Electricity and Electric Telegraph." 3 Will the lead foil with which tea chests are lined do for the plates of a secondary cell? What other metals besides lead can be used for the same? A. Lead foil will do for experiment, but it is not thick enough for practical use. 4. Please tell me how to make fulminate of mercury. A. You will find the method of mak ing fulminate of mercury described in almost every work on chemistry, but weadvise you not to undertake it, as it is a very dangerous explosive. 5. Please ex plain the thermostat used in chicken hatchers. A. I generally consists of a compound thermostatic bar made of brass and steel brazed or riveted together and arranged to open and close dampers, or to regulate lamps either directly or through the medium of an electric current.

(4533) J. J. B. asks: 1. How can I ob tain pure nitrate of silver from the coin? A. Dissolve the coin in nitric acid, evaporate to dryness, fuse, melt at a low heat, cool, dissolve and filter 2. How can l reduce the coin into pure metallic silver, suitable for electroplating? A. Dissolve in nitric acid, precipitate with salt, filter, and wash, and reduce to metallic silver

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with dilute sulphuric acid and zinc. 3. Also nickel and ammonia double sulphate. A. This salt you can be you ready made. Or dissolve equal weights of ammonium sulphate and of nickel sulphate in water, vaporate and crystallize. 4. What are the acids or compounds and proportions used to make pure hydro-inloric acid? A. Salt and sulphuric acid are caused or eact on each other. For 47.5 parts sult, 98 parts of acid are needed. The gaseous hydrochloric acid is ollected in water. 5. Is hydrocyanic acid (prussic cid) expensive? If so please state if it would be heaper to make it in small quantities than to purchase the ready made? A. The dilute acid costs \$1 per original properties of acid and its preparation is exceedingly dangerous, and should not be attempted except by a skilled person. 6. Is there any way that I can temper twist drills hat have become untempered by heating while drilling? A. You can temper by ordinary methods, except that they may bend or spring when dipped. (4534) O. A. J. asks (1) the melting wont of bronze phosphor. A. About 1,692° Fah. 2. Are obaster of Paris moulds sufficiently good to cast bronze lockes for dynamo? A. Plaster of Paris will hardly mover for the moulds. You should use sand of the quality used by brass founders. 3. Please describe low I can melt the bronze in a forge. A. You can nelt bronze in a black lead crucible in the center of the fire and cover the crucible with a large piece of charcoal. What kind of wheel shall I use for water at 28 tounds pressure per half inch? A. For information on small high pressure water wheels we refer you to the catalogues of the manufacturers of such wheels. (4535) C. E. F.—Dirty type is generally leaned by soaking it in cold lye for several days, after which it is washed with hot or cold water. This operation will clean the type but it will not make it as bright is new type. If the type sticks together, it should be coaked in weak ammonia, but if it is copper-faced ammonia cannot be used. It is to be separated by soaking for about a week in	Brush and making the same, A. H. Wolcott. Brush case and pencil holder combined, tooth, S. S. Fox S. Fox S. Fox S. Fox S. Fox S. S	Plow fender, G. N. Spencer. Plow standard and attachment, W. T. Stapler Pole, coupling, A. Drew
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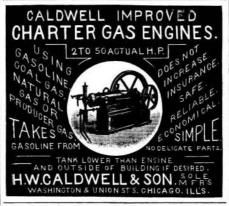
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