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Notes & Queries

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Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication.

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

Inquiries 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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Minerals sent for examination should be distinctly marked or labeled.

(7833) J. P. O. writes: I am about to construct a motor and battery about ¼ horse power. Would you please give me some instructions? A. If you wish to build a motor and battery, you should find the plans of the sort of machine you want, study these thoroughly and follow them carefully. Do not change them in any way. You cannot improve them, and any change you may make will be for the worse. We can recommend the motor and battery described in Parkhurst's "Motor Building for Amateurs," which we can furnish you for $1 by mail.

(7834) J. S. C. asks: 1. In making the induction coil in SUPPLEMENT, No. 160, where can I get the vulcanite cylinder or the vulcanite to make it with? A. Vulcanite can be purchased at any electrical supply store. Ask for hard rubber. The copper bars are of half their real size in the drawings. They may be of almost any size if stiff enough to close it tightly against the commutator. 2. How large do the copper bars L M have to be, and will it work without the commutator and the condenser? If so, how differently will it have to be made? A. A commutator is very desirable in order to reverse the current. A condenser is necessary if you wish the coil to give any spark. 3. Where can I get the Grenet battery cells for it? A. You do not need Grenet cells, a bichromate cell, such as is described in SUPPLEMENT, No. 792, price 10 cents, will be better than the old Grenet. Both use the same materials.

(7835) W. E. G. writes: I read of a preparation for mildew-proofing sails and think it was in one of the SCIENTIFIC AMERICANS. Can you advise me which one it was in, also if it discolors the sail in any way. A. Saturate the cloth in a hot solution of soap (¼ pound to a gallon of water); wring out and digest it for twelve hours in solution of ½ pound alum to 1 gallon of water. Treatment with strong aqueous solution of alum or lead acetate answers very well.

(7836) T. B. asks: What horse power engine will it require to melt a piece of iron weighing 10 pounds by electricity and the use of electrodes, say in two or three minutes time? This is merely an example. If it could not be done in that time give me your best idea? A. Theoretically about 40 horse power would be required if there were no loss of heat at all. We cannot tell any nearer than that since it is not stated in what shape the iron is nor what its resistance is. Practically more than this should be provided, since loss by radiation will be considered.

(7837) W. P. R. asks: Would there be any sound if there were no ears to hear it? A. The word "sound" has two senses. One is the sensation in the ear which produces hearing. In this sense there is no sound where there is no ear. The other sense is the regular vibration of matter which would produce a sensation in an ear. This exists whether there is an ear to receive it or not. The word is thus used for both the cause and its effect on the senses of man.

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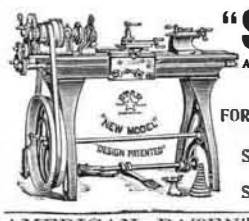
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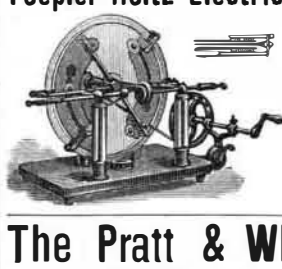
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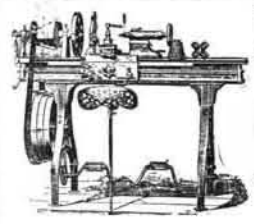
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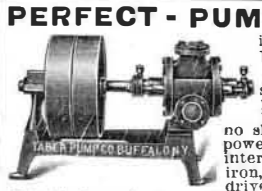
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