

the coil. A. We cannot refer you to such description, as such large coils are generally beyond the limit of an amateur's work. Our SUPPLEMENT, No. 160, gives a coil adapted to give a 1 to 1 1/2 inch spark. One of twice its linear dimensions, but wound with No. 36 wire, should give a 4 to 6 inch spark. 2. How many turns would be necessary to fully saturate a core 2 inches diameter, 30 inches long, No. 14 soft iron, wire, core open, magnetic circuit? A. Owing to the great leakage of lines of force almost any number of ampere turns could be used on the core without completely saturating it. 3. Also what should be the ratio between primary and secondary? I have never had any experience with induction coils, although have had in other lines, and do not just know where to obtain it. A. There is no fixed ratio. We advise you not to attempt to make a coil for 4 inch spark until you have successfully made one such as described in SUPPLEMENT, No. 160 or No. 589.

(6894) J. C. asks: Assuming a green fruit, for instance, a lemon or green apple, can it be converted into a battery? If I pin or confine in a lemon or any green fruit a strip of copper and zinc about half an inch apart, and connect them with a wire, same as in an ordinary battery, electricity will be generated. How can I detect by some visible experiment or proof the presence of electricity? A. Try touching the ends of your wires to a little piece of blotting paper moistened with potassium iodide solution; you may get a brown stain. The wires should be about 1/4 inch apart.

(6895) G. L. H. asks: I am about to make a large induction coil and would like your advice on wire; expect to use No. 36 and wind in thin disks with paraffine. I want to know whether to use double or single covered, cotton or silk. Silk of course is better, but is so expensive. Is it enough better to pay the difference? A. By winding your wire with a lathe you can use bare wire. In our SUPPLEMENT, No. 160, you will find a full description with illustrations of the construction of an induction coil.

**THE LIST OF PATENTS.**

We regret very much that we are not able to publish in this week's issue the index of inventions for which patents were granted for the week ending June 30. We were not able to procure the list from the government printer at the time of going to press, because the government printing office is in arrearage with its work, due to the fact that the money for the Patent Office work is exhausted. The appropriation for the new fiscal year became available, we are informed, on July 1, and we trust that hereafter we may be able to publish the list without interruption.—Ed.

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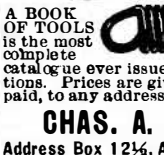
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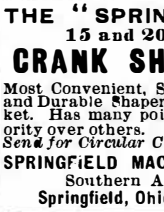
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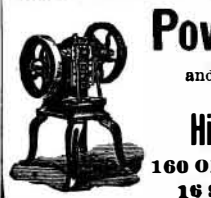


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