

any mistake in constructing the apparatus. Have not missed a copy of the SCIENTIFIC AMERICAN or SUPPLEMENT for four years, and consider it of more benefit to the workman, in the advancement of science, than all others, treating each subject as it does in common, everyday phrases. 1. The number pounds No. 31 on secondary high tension transformer. A. About 3/4 pound. 2. Is it necessary to insulate between each layer? A. There is only one layer. 3. Would there be better results if wound in twenty sections? A. As there is only one layer, it cannot be wound in sections. 4. The diameter of paper cylinder, for secondary of high frequency coil, is eight inches, and of the primary twelve inches. Is more than one layer of No. 31 required? If not, is the space between the primary and secondary an air space? Or is it filled with some insulating medium? A. See preceding query. 5. To what particular part of the machine does the statement apply "between wires of different polarity, as an extra precaution, two layers of cord are wound"? A. To the primary coil of H. F. transformer, Fig. 5. Four wires in parallel are wound in a spiral. The four lie close to each other and the two cords come in between their turns. Thus four wires come close together, then two cords, then four wires and so on. 6. In assembling, we take first the high tension primary, over it place the ten coils of secondary; next, over that place the secondary of the high frequency coil, and over all the primary of the same, or do we keep the high tension and high frequency coils apart, as two distinct apparatus, making connection with condenser as shown in diagram? A. Mount as two distinct apparatus.

(7110) H. B. asks: Will you please answer in the correspondents column the following questions? 1. Kindly give me the receipt for the preparation used in photographing on enamel buttons. A. For information on enamel photography we refer you to articles in SCIENTIFIC AMERICAN, No. 19, vol. 71, also SUPPLEMENT, Nos. 429 and 1038; price 10 cents each by mail. 2. I am making the induction coil, described in SUPPLEMENT No. 160, and want to know whether the same size spark and results can be obtained by using 2 pounds of No. 30 silk covered wire instead of No. 36. A. Not unless you use the same length of wire, or about fifteen and one-half times the weight of the No. 36 wire. 3. When will the 1897 addition to "Experimental Science" be published, or is there none to be issued? A. The new revised and enlarged edition of "Experimental Science" contains a supplement of 120 pages and numerous illustrations published in 1895. Price \$4 by mail. No new supplement to it is in immediate contemplation. 4. How many lights can I get from a dynamo with four fields each 2 1/2 inches high wrapped with No. 12 wire and an H armature 2 5/8 x 3 inches with No. 20 wire, or what is the best size wire to use? A. The armature capacity is 3 to 3 1/2 amperes; the data given are insufficient for anything more than an approximation, but we do not think it would give more than two or three candle power. A laminated drum armature is preferable to the H armature.

(7111) S. R. says: Can you give me the recipe for cleaning gloves, kid and suede, in quantities? A. Damp them slightly, stretch them gently over a wooden band of appropriate size, and clean them with a sponge dipped in benzole, recently rectified oil of turpentine, or camphine. As soon as they are dry, withdraw them gently from the stretcher, and suspend them in a current of air for a few days, or until they cease to smell of the cleaning liquid used. Heat must be avoided. The cleaning liquid should be used liberally, and the first dirty portion should be sponged off with clean liquid.

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FEBRUARY 2, 1897,

AND EACH BEARING THAT DATE.

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TRADE MARKS.

Table listing trade marks with names and patent numbers. Includes items like Beer, lager, Born & Company, 29,547; Bioxide of barium, chloride of barium, nitrate of baryta, hydrate of baryta, peroxide of hydrogen, sulfide of barium, and sulfide of copper, Hedworth Barium Company, 29,554; Bitters, stomach, H. L. Coombs, 29,548; Boots and shoes, S. Putney & Company, 29,543; Canned salmon, Seufert Brothers Company, 29,545; Cement, lime, and plaster, Rock Plaster Company, New York and New Jersey, 29,551; Coal tar products, excepting dyes, Barrett Manufacturing Company, 29,550; Drills or drill presses, Sibley & Ware, 29,556; Fruit, dried, Protopatz Brothers, 29,544; Glass batch, composition for manufacturing, J. Kemper, 29,552; Gunpowder, shells loaded therewith, blasting powder, gun cotton, high explosives, fuses, and electric batteries, Laflin & Rand Powder Company, 29,549; Lamps, bicycle, Cycle Danger Signal Company, 29,558; Paper, writing, note, and other, Whiting Paper Company, 29,541; Remedies for neuralgia, rheumatism, and similar maladies, Hardmillie Brothers, 29,550; Rubber specialties for use by physicians and invalids, Diamond Rubber Company, 29,557; Scouring material, Scour Bright Company, 29,553; Sealing copper, Union Hardware Company, 29,580; Tea, Raddock, cocoa, chocolate, and chicory, C. A. Raddock, cigars, snuff, distilled and fermented liquors, and beverages, G. J. Richter, 29,549; Watches, Mosbacher & Company, 29,540;

DESIGNS.

Table listing designs with names and patent numbers. Includes items like Bedstead, J. Scott, 26,597; Bedsteads, end frame for metal, D. Frank, 26,586; Bedsteads, head and foot board for metallic, E. C. Baynes, 26,588; Bicycle frame, F. P. Burham, 26,586; Bicycle frame, C. R. Harris, 26,580; Cake or cracker, W. W. Miller, 26,575; Card, folding, J. T. Rosenheimer, 26,581; Carpet, G. M. Fauser, 26,608; Carpet, J. W. Hill, 26,610; Carpet, A. M. Rose, 26,603; Carpet, N. S. Stewart, 26,603 to 26,607; Churn dasher, S. J. Hunter, 26,588; Cigar holder, C. S. Lehman, 26,579; Court plaster box, S. L. Utzig, 26,578; Draught lug and drawbar follower, A. G. Steinbrenner, 26,586; Fastening, F. S. McKenne, 26,583; Horseshoe calk, A. H. Rowe, 26,587; Ironing board, H. J. Hare, 26,589; Match safe, C. A. Daniel, 26,577; Pens and filers, holder for fountain, H. M. Johnson, 26,580; Plate, W. H. Grindley, 26,582; Pump frame, T. L. Murphy, 26,591; Radiator, W. A. Castle, 26,583; Radiator, D. Colestock, 26,592; Stove door or panel, L. Kahn, 26,594; Target, Hannold & Sinner, 26,604; Thill coupling plate, C. T. Redfield, 26,604; Trimming, M. Loyd, 26,601, 26,602; Truck side frame, car, W. F. Richards, 26,585;

A printed copy of the specification and drawing of any patent in the foregoing list, or any patent in print issued since 1863, will be furnished from this office for 10 cents. In ordering please state the name and number of the patent desired, and remit to Munn & Co., 361 Broadway, New York. Special rates will be given where a large number of copies are desired at one time.

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