

Business and Personal.

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Mr. Johan Koopmans, of the firm of Johan Koopmans & Co., commission merchants and agents of American manufacturers in Amsterdam, Holland, will be in the United States this month to solicit the representation of manufacturers and exporters. Would also solicit the agency of an American flour mill. For reference or further information, apply to Jos. Agostini, 62 Broad St., New York.

The Engineering Record, the recognized authority on municipal and building engineering, has recently been enlarged by the addition of a department in which notable industrial plants are regularly described and illustrated, the steam and power plants being a conspicuous feature. Recent publications include the great Ivorydale plant of Messrs. Proctor & Gamble, described in 23 columns and illustrated by 57 drawings. The steam plant at Ivorydale is separately treated in 13 columns and 31 drawings. The new foundry of Henry R. Worthington, at Elizabethport, N. J., 16 columns, 26 illustrations. National Metal Company's foundry and brass finishing shop, Brooklyn, 13 columns, 29 illustrations. Niagara Power Plant (now in process of publication), 6 columns, 6 illustrations. Steam power plant of the Dwight Manufacturing Co., Chicopee, Mass., 9 columns, 7 illustrations. Published Saturdays, 12 cents a copy. The Engineering Record, 277 Pearl St., New York.

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Notes & Queries

HINTS TO CORRESPONDENTS. 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 This is for our information and not for publication.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. Special Written Information on matters of personal rather than general interest cannot be expected without remuneration. Scientific American Supplements referred to may be had at the office. Price 10 cents each. Books referred to promptly supplied on receipt of price. Minerals sent for examination should be distinctly marked or labeled.

(4608) W. I. S. asks: 1. What is the strongest electric battery known to science? How made? A. Practically the storage battery. For high voltage a battery using sodium as the positive element may be cited. A couple has been described which is supposed to give nearly 4 volts E. M. F. 2. What is the platinum type photographic paper coated with, and what is the developer used composed of? A. Platinum type paper is coated with iron and platinum salt and developed on cold solution of potassium. It is a patented process. The prepared paper can be obtained from Willis & Clements, Philadelphia, Pa. 3. How may blue prints be copied with the camera? A. Blue prints may be copied by inserting an orange red glass screen in the camera behind the lens and giving three times the usual exposure. 4. How may I make good black ink suitable for a fountain pen? A. Try following: Concentrated borax solution, 4 parts; shell-lac, 1 part; aniline black, q. s. Or try an aqueous solution of aniline black. 5. How may I plate small articles without a battery, in silver or gold? A. For gold and silver plating try the following: Solution for Gilding Brass and Copper.—The following formula has been adopted for water-gilding, as it is termed. Fine gold, 6 1/2 dwts. Convert the gold into chloride and dissolve in 1 quart of distilled water, then add 1 pound bicarbonate of potassium and boil the mixture for two hours. Immerse the articles to be gilded in the warm solution for a few seconds up to one minute, according to the activity of the bath. Silver Wash.—Mix 1 part chloride of silver with 3 parts pearl ash, 1 1/2 parts common salt, and 1 part whiting, and rub the mixture on the surface of brass or copper, previously well cleaned, by means of soft leather or a cork moistened with water and dipped into the powder. When properly silvered, the metal should be well washed in hot water, slightly alkalinized, and then wiped dry. 6. I inclose a substance which I found on breaking open a piece of anthracite coal. Please tell me what it is. A. The substance is a piece of shale or slaty coal. It seems intermediate between a true slate and coal.

INDEX OF INVENTIONS For which Letters Patent of the United States were Granted November 22, 1892, AND EACH BEARING THAT DATE. [See note at end of list about copies of these patents.] Air brakes, automatic regulator for, M. L. E. Duval, 486,708 Alarm. See Fire alarm. Annunciator, electrical, F. S. Carter, 486,820 Anvil attachment, G. W. Rice, 486,530 Attrition mill, W. H. Hoffman, 486,580 Attrition mill bushing, W. H. Hoffman, 486,581 Autograph register, H. Cook, 486,768 Axle washer rack, T. Gingsras, 486,640 Bag holder, M. Fortin, 486,708 Baking pan, E. E. Ogden, 486,734 Balance wheel, Bouck & Lovendale, 486,754 Bale tie, J. E. Rollins, 486,795 Bale tie machine, W. S. Livengood, 486,615 Basket protector, clothes, L. Beard, 486,527 Baskets, machine for forming berry, R. E. Morey, 486,674 Bath room drying companion, D. W. Leet, 486,674 Bed or pillow, A. S. Curran, 486,483 Belt fastener, F. E. Shant, 486,570 Bench stop, S. W. Jenks, 486,472 Bicycle, A. H. Clark, 486,432 Bicycle, A. S. 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