

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 This is for our information and not for publication.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. Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same. 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.

(6504) A. A. B. says: Please inform me through your columns how to make a liquid to transfer photographs or printed matter from paper on glass. A. Any picture, print or even clipping from newspapers, any engraving, no matter in how many colors, or on what kind of paper, may be transferred to glass, says a contemporary, only the treatment of the different kinds of paper differs. Place the object to be transferred, face downward, upon a larger sheet of manilla paper; prepare a solution of from one to three per cent of nitric acid in water, according to thickness and strength of paper and how strong it was sized; ordinary newspapers and printings or engravings on unsized glaze paper require even less than one per cent nitric acid. One of the purposes of adding nitric acid is to remove the sizing out of the paper. Apply this solution with a sponge to the back of your object to be transferred; be careful not to overdo it; you only want to render the paper soft but not wet. Continue sponging with this solution until you see the printing plainly; that is, until the paper becomes transparent. Clean the glass plate thoroughly with alcohol by means of a ball of clean cotton; dry it off well; wash it with turpentine; dry it off again; place the glass plate upon a smooth elastic layer—for instance flannel—and with this elastic layer upon a table, or better yet, upon a rubber blanket in the litho hand press. Now coat the cleaned surface with a thin coat of half turpentine and half dammar varnish; let it dry from ten minutes to one day, according to temperature and thickness of dammar varnish. The coating should not be allowed to dry entirely; it should be a trifle adhesive. Lay your impression face downward upon the glass plate; it is important that neither acid nor water touches the surface during the entire process. To properly lay down the impression, take it up with both hands by holding the left hand under corner and the right hand upper corner; be careful not to get any air bubbles under the sheet. This is best accomplished by marking upon the plate the exact position and size of the sheet. Laying down the paper first, adjust the right hand upper corner to the mark on the plate, hold it there with the tip of your finger and adjust the left hand lower corner, but be careful to avoid air bubbles. Press the sheet to the adhesive dammar coat. This may be done in many different manners. It does not require a very strong pressure, but it should be observed that each and every spot has to be pressed repeatedly against the plate. When the paper sticks quite smoothly to the plate, fan it perfectly dry, and then with wet finger tips slowly rub off the paper. If this is done with great care, you will remove every vestige of paper, and the print, of whatever color or nature it may be, will remain on the glass plate. Upon this apply another coat of dammar varnish containing very little turpentine. With too much turpentine, you run the risk of washing the entire picture from the plate again.

(6505) C. S. asks: 1. Fully describe the common return system of telephone wiring for exchange purposes. A. For telephone exchange connections we refer you to the SCIENTIFIC AMERICAN, No. 13, vol. 60, No. 22, vol. 67, and SUPPLEMENT, Nos. 772, 733, 413, 998, 1004. 2. What would be the effect if each plate of a storage battery were inclosed in a porous clay envelope, like carbon in porous cup of open circuit batteries? A. It would increase the resistance without any compensating advantage. 3. If ampere capacity of plates of a storage cell is 6 amperes, would a flow of 1 ampere for 6 hours exhaust it? A. Divide the ampere hours by ten to get the working current. "Ampere capacity" should mean the working current.

INDEX OF INVENTIONS

Table listing inventions with titles like 'Boiler, W. H. Fetter', 'Book stapling machine, F. Hart', etc., and their corresponding page numbers.

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TRADE MARKS.

Table listing trade marks with titles like 'Apparel, certain named wearing, Burnham', 'Boots and shoes, Walker & Whitman', etc., and their corresponding page numbers.

DESIGNS.

Table listing designs with titles like 'Biscuit, H. Wanklin', 'Book mark, D. Stone', 'Brick, fire, A. B. Clunies', etc., and their corresponding page numbers.