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Whereas, the copartnership heretofore existing in the City and State of New York between Orson D. Munn and Alfred E Beach, under the copartnership name of Munn & Co., and having its principal place of business at No. 361 Broadway, in the City and State of New York, has been dissolved by the death of Alfred E. Beach on January 1, 1896; and

Whereas, the said copartnership had business relations with foreign countries and transacted business in the State of New York for a period of five years and upward; and

Whereas, I, Orson D. Munn, the surviving copartner, am desirous to continue the business conducted by the said copartnership and to continue the use of the name of Munn & Co.

Now, I, Orson D. Munn, do hereby certify and declare that I am the person dealing under such name of Munn & Co., and that my place of abode is 14 East Twenty-second Street, City of New York, and that my principal place of business is at No. 361 Broadway, in the City and State of New York.

(Signed) ORSON D. MUNN. [L.S.]

In presence of
A. A. HOPKINS.

City and County of New York, ss:

On this 6th day of January, in the year 1896, before me personally came Orson D. Munn, to me known to be the individual described in and who executed the foregoing instrument and acknowledged to me that he executed the same for the purposes therein mentioned.

(Signed) A. A. HOPKINS,
[L.S.] Notary Public,
Kings County, New York.

Certificate filed in New York County.

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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 This is for our information and not for publication.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.

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.

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Minerals sent for examination should be distinctly marked or labeled.

(6704) T. O'C. asks for a formula for a benzine and petroleum resisting cement, and also for bicycle cements. A. Cement to resist benzine and petroleum: It has quite recently been discovered that gelatine mixed with glycerine yields a compound liquid when hot, but which solidifies on cooling, and forms a tough, elastic substance, having much the appearance and characteristics of Indiarubber. The two substances united form a mixture entirely and absolutely insoluble in petroleum or benzine, and the great problem of making casks impervious to these fluids is at once solved by brushing or painting them on the inside with the compound. This is also used for printers' rollers and for buffers of stamps, as benzine or petroleum will clean them when dirty in the most perfect manner in an incredibly short space of time. Water must not be used with this compound. Cement for Cuts in Bicycle Tires, etc.—In 10 oz. carbon bisulphide dissolve 20 oz. caoutchouc; 10 oz. gutta percha; and 5 oz. fish glue. Bind the tire well with cord until set. Bicycle Tire Cement.—2 parts of pitch and 1 part of gutta percha are melted together. Use hot.

(6705) P. W. N. asks for information on the sand blast process of engraving. A. Sand driven by an air blast of the pressure of 4 in. of water will completely grind or depolish the surface of glass in ten seconds. If the glass is covered by a stencil of paper or lace, or by a design drawn in any tough elastic substance, such as half dried oil, paint or gum, a picture will be engraved on the surface. Photographic copies in bichromated gelatine from delicate line engravings have been thus faithfully reproduced on glass. In photographic pictures in gelatine, taken from nature, the lights and shadows produce films of gelatine of different degrees of thickness. A carefully regulated sand blast will act upon the glass beneath these films more or less powerfully, in proportion to the thickness of the films, and the gradations of light and shade are thus produced on the glass. In the apparatus used air rises through a curved tube, carrying the sand up with it, which is thrown into the air tube by an endless belt of scoops arranged in the lower part of the angular box. The sand is carried up by the air and brought over and down the front air tube, where it discharges with great force upon the surface of the glass, which is contained within the front box and is carried by a belt gradually forward under the blast.

(6706) J. W. B. asks how to prevent a crack in a piece of metal from extending. A. A crack in a piece of metal is prevented from extending further by the well known means of drilling a hole where the rent ends; but when the hole is not bored on just that spot, the crack is apt to continue beyond the hole. To facilitate the search for the exact point, Revue Industrielle recommends moistening the cracked surface with petroleum, then wiping it and immediately rubbing it with chalk. The oil that has penetrated into the crack exudes, and thus indicates with precision where the crack stops.

(6707) A. C. writes: I wish to obtain full information about electric furnaces, acetylene gas, carbide of calcium, the reactions and the pressure required to reduce the gas to liquid form. A. We refer you to the following SUPPLEMENTS, which give very exhaustive information and the most recent reliable data concerning acetylene and calcium carbide: SUPPLEMENTS, Nos. 998, 1004, 1007, 1012, 1013, 1014, 1015, 1016, 1035, 1038. We also have several articles on the subject in the SCIENTIFIC AMERICAN. Electric furnaces are treated of in several SUPPLEMENTS. We can supply all of the above. You can get calcium carbide of Elmer & Amend, 211 Third Avenue, New York City.

(6708) C. S., Utah, asks: Which is the best method to temper and magnetize steel rods 4 inches to 6 inches long and from ⅛ to ¼ inch in diameter? A. Any steel bars, rods, or drawn steel wire that will harden may be used for magnets. The pieces, if required to be straight after hardening, should be straightened and annealed, and then made straight in their soft state. Then heat to a full red by daylight and plunge in water vertically by dropping. Then clean so that the tempering color can be easily seen, draw the temper on an iron plate to a deep orange color and cool in water. To magnetize lay the ends of the rods alternately on the n. and s. poles of a permanent or electro-magnet, or, if convenient, you can utilize the magnet of a dynamo or motor.

(6709) H. W. P. wants to know how to make gelatine sheets. A. Dissolve fine glue or isinglass in water, so that the solution when cold may be consistent. Pour it hot on a plate of glass (previously warmed with steam and slightly greased) fitted in a metallic frame whose edges are just as high as the wafer should be thick. Lay on the surface a second glass plate, also hot and greased, so as to touch every point of the gelatine while resting on the edges of the frame. By its pressure the thin cake is rendered uniform. When the glass plates have cooled the gelatine will be solid and may be removed. It can then be cut into disks by punches, etc. It can, of course, be colored by adding suitable coloring material, aniline colors for instance.

(6710) H. R. T. asks for directions for preserving the natural colors of flowers. A. A recent improved receipt for preserving plants with their natural colors is to dissolve 1 pt. salicylic acid in 600 parts alcohol, heat the solution up to boiling point in an evaporating vessel and draw the plants slowly through it. Shake them to get rid of any superfluous moisture and then dry between sheets of blotting paper under pressure in the ordinary manner. Too prolonged immersion discolors violet flowers, and in all cases the blotting paper must be frequently renewed. The novelty appears to be the salicylic acid.

TO INVENTORS.

An experience of nearly fifty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequaled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices, which are low, in accordance with the times and our extensive facilities for conducting the business. Address MUNN & CO., office SCIENTIFIC AMERICAN, 361 Broadway, New York.

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AND EACH BEARING THAT DATE.

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Salve for use upon animals, W. M. Melick 27,671
Tacks, shoe, Goodyear Shoe Machinery Company 27,683
Tin and terne plates and similar goods, American Tin Plate Company 27,677
Whisky, W. A. Taylor & Company 27,665
Wines, W. A. Taylor & Company 27,664

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 25 cents. In ordering please state the name and number of the patent desired, and remit to Munn & Co., 361 Broadway New York.

Canadian patents may now be obtained by the inventors for any of the inventions named in the foregoing list, provided they are simple, at a cost of $40 each. If complicated the cost will be a little more. For full instructions address Munn & Co., 361 Broadway, New York. Other foreign patents may also be obtained.

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