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The Scientific African.—The Scientific African is the name of a new journal, the first copy of which has just been received.

SCIENTIFIC AMERICAN BUILDING EDITION.

JANUARY, 1896.—(No. 123.)

TABLE OF CONTENTS.

- 1. A residence at Orange, N. J. Two perspective elevations and floor plans, also an interior view. Approximate cost \$12,000.

The Scientific American Building Edition is issued monthly. \$2.50 a year. Single copies, 25 cents.

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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.

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, Notary Public, Kings County, New York.

Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway, New York. Free on application.

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 This is for our information and not for publication.

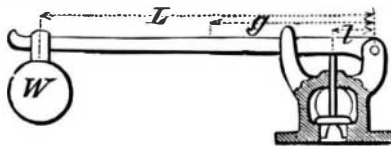
(6711) F. W. B. asks for directions for making an ever-ready pad for rubber stamps: A. The following is said to be a cushion that will give color permanently. It consists of a box filled with an elastic composition, saturated with a suitable color.

(6712) F. W. writes: I would like to ask a few questions concerning an acetylene gas plant arranged on the principle of the one described on page 8 of the SCIENTIFIC AMERICAN of January 4, 1896. 1.

How large would generator bottle and receiver have to be to supply two jets that have been used for coal gas (ordinary dwelling house size). Can acetylene gas be used in such fixtures? A. You cannot use ordinary burners for acetylene.

(6713) G. H. DeL. asks: 1. On a 500 volt street railway circuit, how much current does any one car take at full load? A. At 50 horse power 75 amperes could be taken.

(6714) R. N. T. says: Will you give me formulas for computing the elements of a safety valve?



A. Let W = the weight. L = distance between center of weight and fulcrum in inches. Let w = weight of lever in pounds.

When the weight is at hand and known, and the distance is required, then

(6715) D. P. D. says: Please let me know, through the SCIENTIFIC AMERICAN, how to put a 1/4 in. hole through a heavy glass bar?

(6716) C. J. M. asks how to make leaf photographs. A. Pass the paper first through a solution of gelatin, 1 part in 20 parts of hot water, and use a strong solution of potassium bichromate; or the gelatin and bichromate may be used together.

(6717) G. D. H. says: Can you give me simple rules for calculating the speed of pulleys? A. The diameter of the driven being given, to find its number of revolutions.

Rule.—Multiply the diameter of the driver by its number of revolutions and divide the product by the diameter of the driven; the quotient will be the number of revolutions of the driven.

Rule.—Multiply the diameter of the driver by its number of revolutions, and divide the product by the number of required revolutions of the driven; the quotient will be its diameter.

Rule.—Multiply the diameter of the driver by its number of revolutions, and divide the product by the diameter of the driven together; divide the drivers by the driven; the answer multiply by the known revolutions of the main shaft.

Rule.—Multiply all the diameters of the drivers together and all the diameters of the driven together; divide the drivers by the driven; the answer multiply by the known revolutions of the main shaft.

Rule.—Multiply the diameter of the driven by the number of revolutions you wish to make, and divide the product by the required revolutions of the driver; the quotient will be the size of the driver.

Rule.—Multiply all the diameters of the drivers together and all the diameters of the driven together; divide the drivers by the driven; the answer multiply by the known revolutions of the main shaft.

Rule.—Multiply all the diameters of the drivers together and all the diameters of the driven together; divide the drivers by the driven; the answer multiply by the known revolutions of the main shaft.

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 unequalled facilities for procuring patents everywhere.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

January 28, 1896, AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Table listing various inventions and their patent numbers, including: Advertising apparatus, J. H. Scott; Advertising device, A. C. Doster; Advertising device, M. H. Richardson; Advertising or other apparatus, flexible carrier, A. C. Aillyn; Air and gas mixing machine, B. S. Dunn; Air heater, H. G. Dohrnann; Alarm, See Low water alarm; Amalgamator, S. A. West; Armature for electric machines, R. M. Gardner; Atomizer, C. Ruppolt; Atomizer, See also A. C. Beard; Auger, earth, H. Pederson; Axles, roller bearing for railway car, P. N. Boucher; Bag holder, F. Gow; Baling press, F. L. Robinson; Barrel, charging or discharging apparatus, E. Friedman; Barrels, method of and apparatus for making, R. Klinger; Basins, combination supply and waste fixture for wash, J. Rothman; Battery, See Electric battery. Secondary battery; Bearing, antifriction, A. H. McMaster; Bearing, ball, Meyer & Carrer; Bedstead fastening, J. T. Watkins; Bell, bicycle, F. S. Sullivan; Belt stretcher, G. M. Parreau; Bicycle habit, H. W. Rood; Bicycle hub, self-oiling, O. Kraus; Bicycle, military, T. V. Handloser; Bicycle pedal, F. D. Owen; Bicycle pedal, See also, A. A. Bailey; Bicycle seat, back support, W. E. Prall; Bin, See Flour bin; Bloomers, T. H. Royce; Blowpipe, T. B. Walsley; Blue, laundry, J. W. Fuller; Boiler, See Hot water or steam boiler. Marine boiler. Steam boiler; Book cover, C. L'Enfant; Book, manifold sales, J. Benzough; Bottle, G. W. Upton; Bottle filling device, J. Iredale; Bottle, non-flammable, H. G. Wood; Bottle stopper, safety, L. Landau; Brake, See Air brake; Buckle, T. F. Cavanagh; Burner, See Fuel burner; Bustle, shoulder, T. P. Taylor; Burton, collar, F. A. Wattenberg; Button feed mechanism, W. E. Bennett; Calipers, L. C. Reiser; Can, See Oil can; Cane mill, C. A. Calvert; Car coupling, J. S. Boyd; Car coupling, F. C. Ewart; Car coupling, J. M. Larkin; Car drop door, J. E. Simons; Car fender, M. F. Flynn; Car fender, L. Hachenberg; Car fender, J. B. Kendall; Car fender, E. C. McBurnie; Car fender, C. M. Riley; Car fender, street, H. L. Bedford; Car, band, A. Hitt; Car lubricator, coal, G. Maurer; Car pilot, railway, E. P. McKaig; Car replacer, Herstrom & Grandjean; Cars and locomotives, construction and connection of railway, E. Langren; Cars, electrical propulsion for street or other, J. Jackson; Card punching machine, Jacquard, H. Hardwick; Cardboard, adjustable cutter for cutting, C. W. Hobbs; Carding engine feeding mechanism, F. A. Flather; Carpet sweeper, A. D. & A. B. Linn; Carriage iron, F. S. Carr; Carrier, See Cash and package carrier; Cash and package carrier, Weaver & Barr; Cash check holder and cutter, A. D. Joslin; Casting, production of moulding an core sand for, K. Prutzler; Chain, lock, P. S. Kingsland; Checkrein attachment, F. L. Adams; Cheese cutter, N. J. Smith; Chuck, drill, G. S. Long; Churn and ice cream freezer, combined, W. H. De Camp; Cigar bunch machine, Rosenberger & Jackson; Cigarette machine, W. C. Briggs; Cigarette splitting machine, J. F. Hartigan; Cleaner, See Dish cleaner; Condiment holder, J. Frye; Cooker, coffee, W. B. Lancaster; Copying device, E. Terrell; Copying machine, J. O. Deckert; Cordage machine, interlocked, G. McKay; Corset clasp protector, J. C. Gilroy; Cotton gin, G. J. Rice; Coupling, See Car coupling; Crucible, C. Capper; Cultivator, F. E. Davis; Cultivator, trip bank, M. Sattley; Cutter, See Cheese cutter. Dowel cutter. Pipe cutter; Dark room, F. A. Wattenberg.