

may be spread to dry on clean grass. Otherwise curtains are always better for being stretched and pinned to wooden frames while drying. It is advisable to use cooked starch for curtains. Use good starch, mix it thoroughly in warm water, which should be made to boil for fifteen or twenty minutes. While cooling add a very little indigo blue. This is only to be used for pure white curtains. The starch should be decidedly thick. Draw the curtains through the starch, squeeze out gently, and dry rapidly.

(6786) F. A. H. says: I. Can asbestos be made in liquid form or solution? If so, please give formula. A. It is impossible to get asbestos into a liquid form except by fusion. 2. Is there a cement or paste with which a meerscham article can be mended? If so, please name ingredients. A. Dissolve casein in a solution of waterglass (sodium silicate) and stir into it calcined magnesite and use at once. Casein is prepared by allowing perfectly skimmed milk to stand until it curdles, when the casein is filtered out and washed on the filter. To simplify above a little fresh cheese may be boiled in water and mixed with slaked lime and ashes, using 10 parts cheese, 20 parts water, 2 1/2 parts lime, and 2 parts woody ashes.

(6787) F. A. L. says: Can you, through the columns of your valuable paper, tell me of a simple method of blackening brass for the fittings of a lens and other camera fittings? A. The dead black on optical instruments is produced by dipping in a solution of chloride of platinum. To make this, take 2 parts hydrochloric acid, 1 part nitric acid, mix in a glass bottle and put in as much platinum foils as the acid will dissolve when placed in a warm sand bath, or, to hasten the solution, heat to nearly the boiling point of the acids. 1 1/2 ounce nitric acid and 1 ounce hydrochloric acid will absorb about 30 grains platinum, but in order to neutralize the acid, it is better to have a surplus of platinum. Dip the article or brush in the chloride.

(6788) C. G. asks: Will a pair of oval or elliptical cog wheels work smoothly, like round ones, if they are cut right? If so, where could I get a pair? Can you tell me on what class of machinery they are used? That would give me an idea as to where to get them. What book can I get on gearing (some simple book)? A. Elliptical gearing will run fairly smooth if properly cut. They are used where irregular motion is required. Elliptical and other irregular gearing is described and illustrated in SCIENTIFIC AMERICAN SUPPLEMENT, Nos. 2 and 141, Differential Gear Wheels in Nos. 134 and 419, Planetary Wheel Trains in Nos. 419, 437, 441, 451, 470, 482, 359, a very complete illustrated description of special forms of gearing, 10 cents each mailed.

(6789) S. R. writes: I have built the 8 light dynamo No. 600, and would like to ask you a few questions, as follows: 1. What is the proper thing to use to connect the brushes? Is it necessary to have regular brush cable, or will a single wire do? A. Use cable or wire; cable is preferable. 2. Should ends of brushes be beveled, so as to lap from one segment to another? A. Bevel the ends not enough to touch more than two segments at once. 3. What would be the best and cheapest power for same? A. A steam engine. 4. Please state what appliances I need for lighting my store from this machine. I want to get along with as little apparatus as possible. A. A switchboard, rheostat and safety fuses, or automatic cut-out. The engine must be accurately governed as regards speed. 5. Is there any particular danger of fire from this machine; that is, would you have to use the same precaution that you would for a larger plant? A. Not if you use extra large wires. Omit no precautions.

(6790) C. H. D. says: 1. How can I make dry plates for photography? A. You will find an article on dry plate making in the SCIENTIFIC AMERICAN SUPPLEMENT, No. 541. Mailed on receipt of 10 cents. Amateurs seldom make plates except as an amusement. 2. Can I make a positive from a negative plate by placing the film of a plate against the film of a developed negative plate, and expose so that the light shines through the negative? A. You can make a positive in the way you mention; the exposure must, however, be very short; daylight is too strong. Use transparency plates, with artificial light, and expose for a few seconds only. Special plates are made by the plate makers for positives.

(6791) G. H. T. asks: Will somebody in the SCIENTIFIC AMERICAN office kindly give me a recipe for a good substantial whitewash for the outside of buildings? I saw such in a copy of your paper years ago, but have no means of getting at it now. A. Whitewash, United States Government.—The following coating for rough brick walls is used by the United States government for painting lighthouses, and it effectually prevents moisture from striking through: Take of fresh Rosendale cement, 3 parts, and of clean, fine sand, 1 part; mix with fresh water thoroughly. This gives a gray or granite color, dark or light, according to the color of the cement. If brick color is desired, add enough Venetian red to the mixture to produce the color. If a very light color is desired, lime may be used with the cement and sand. Care must be taken to have all the ingredients well mixed together. In applying the wash, the wall must be wet with clean fresh water; then follow immediately with the cement wash. This prevents the bricks from absorbing the water from the wash too rapidly, and gives time for the cement to set. The wash must be well stirred during the application. The mixture is to be made as thick as can be applied conveniently with a whitewash brush. It is admirably suited for brickwork, fences, etc., but it cannot be used to advantage over paint or whitewash.

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. 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.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

March 10, 1896,

AND EACH BEARING THAT DATE.

(See note at end of list about copies of these patents.)

Table listing inventions with names and patent numbers. Includes entries like 'Advertising apparatus, T. G. Daly', 'Air compressor, H. G. Williams', 'Animal trap and chicken coop, combined, J. M. Harvey', etc.

Table listing inventions with names and patent numbers. Includes entries like 'Fire escape, G. W. Root', 'Fire escape, grip for portable, G. L. Kingsbury', 'Fire extinguisher, Coffey & Murray', etc.

Table listing inventions with names and patent numbers. Includes entries like 'Saluting device, J. C. Boyle', 'Saw, E. Viewegh', 'Scale set, H. U. Kistner', etc.

DESIGNS.

Table listing designs with names and numbers. Includes entries like 'Badge, G. A. Schlechter', 'Badge, Skelly & Anderson', 'Biscuit, F. L. Casselberry', etc.

TRADE MARKS.

Table listing trade marks with names and numbers. Includes entries like 'Beverages, certain name, Phillips Brothers', 'Bicycles, Jenkins Cycle Company', 'Bicycles, tricycles, and other similar light vehicles', etc.

A printed copy of the specification and drawing of any patent in the foregoing list, or any patent in print issued since 1883, 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.