

STAINING GROWING WOOD.—Professor Stebbing in a letter to one of the photographic journals, declares that, ere long, we shall be able to have all our furniture—even articles of common deal—of such a beautiful colour as to throw out of fashion mahogany and other foreign woods. A Frenchman has discovered a new method of compelling the tree to colour itself. He operates upon it at the moment when the sap is rising after its winter's repose to give life and vitality to the branches. He introduces a chemical (how?) into this vivifying agent, and it distributes the colouring composition through every pore and fibre of the tree! When the colouration is terminated the knots and veins contain such a multitude of shades, harmonising one with the other, that furniture made of it has at once a strange and fascinating appearance.

M. ADOLPHE Brongniart, the distinguished French botanist, died in Paris on Feb. 19. He was born in 1801. Besides his many botanical works, Brongniart is known as one of the first to discover the pollen-tube, and the important nature of the offices performed by it in the fertilization of plants.

PHOTOGRAPHING MACHINERY.—The use which manufacturers make of photography is shown by the circumstance that some of our larger firms retain the services of a photographer, whilst others have so much work to do that a studio and photographer, form portion of their establishment. For some time past Krupp, the well-known cannon manufacturer at Essen, has availed himself of photography to a large extent, and has, indeed, gone so far as to adopt the Lichtdruck process, for the number of copies frequently required of one plate or another is so large that their production would necessitate a long time, if printed in silver. In securing records of models, or of finished work, before it is sent out of the workshops, photography is found to be extremely useful, and such firms as Penn and Sons, of Greenwich, Sir Joseph Whitworth and Co., and Sir W. Armstrong and Co., of the Elswick Ordnance Works, employ the art frequently in this connection. Photographing machinery is by no means an easy matter to the beginner, for it is difficult at one and the same time to show intricate mechanism on the under side of a machine, while the high lights are not solarised. The hand mirror is sometimes very skillfully made use of in work of this kind.—*Photographic News.*

A ROSEWOOD STAIN OF A VERY BRIGHT SHADE.—Take 1 gallon of alcohol, 1½ lbs. of cam-wood, ½ lb. red sanders, 1 lb. of extract of logwood, and 2 ozs. of aquafortis. When dissolved it is ready for use. This makes a very bright ground. It should be applied in three coats over the whole surface. When it is dry, sand-paper down to a very smooth surface, using for the purpose a very fine paper. The graining is then to be done with iron rust, and the shading with asphaltum, thinned with spirits of turpentine. When the shading is dry apply one thin coat of shellac, and when this is dry, sand-paper down, as before, with fine paper. The work is then ready for varnishing.

IMITATION MARBLE.—Pichler, gilder and decorator, of Vienna, communicates the following simple method of preparing imitation marble for all sorts of decorative purposes. Mix 1 lb. finely powdered lime into a thick paste with water, and add ½ lb. of colaphane, or, what is better, Venice turpentine. Allow the mixture to stand for some time, and then work up with it suitable quantities of fine white chalk and various colored earths, adding a few drops of olive oil if necessary. A soft mass is thus obtained, which can be moulded, like plaster of Paris, to any desired form, or it can be rolled out on a warm metal plate, or pressed under wooden rollers, into thin sheets, which can be glued to the surface to be decorated, like ordinary veneers, and left to harden. It hardens and takes a good surface. Any cavities that appear must be filled up with some of the composition mixed with oil of turpentine. The composition will keep fit for use for some time, if covered up with a damp cloth while moist.

FURNITURE PASTE.—If it is required to keep the wood its natural color, scrape a quarter of a pound of beeswax into half a pint of turpentine. Linseed oil will darken the wood.

Six ounces of pearlsh in a quart of hot water, and add a quarter of a pound of white wax, and simmer for half an hour in a pipkin. When cool the wax will float on the top, which must be taken off, and, with hot water, worked into a paste.

WHITE FURNITURE CREAM.—With the following receipt the vinegar must be mixed with the linseed oil by degrees, and the bottle well shook up. The spirit of antimony must afterward be added, and well mixed. Six ozs. of raw linseed oil, three ozs. methylated spirit, three ozs. white wine vinegar, half an ounce of butter of antimony.

CABINET-MAKING.

(See page 172.)

We furnish in this number, on page 172, designs of chairs for which we are indebted to the *Boston Cabinet Maker*.

It is our intention in future numbers to give one page of illustration to this branch of mechanical labor, which we have no doubt will be appreciated by cabinet-makers in country places, who have not the same advantages as those residing in large towns.

Figs. 1 and 2 are cuts of a very comfortable chair, with a foot rest and a unique little slipper box attached to it; is a most desirable chair for invalids.

Fig. 3 is a design for a camp and folding chair.

Fig. 4, a rocker, with an attachment which gives a long easy movement avoiding the short jerking movement so unpleasant in other platform rockers.

Fig. 5, another form of rocker.

Fig. 6, a piano stool, the upright back is of much advantage to keep pupils in an upright position.

Figs. 7 and 8, folding chairs.

Fig. 9, an easy chair.

Fig. 10, an invalid cabinet and reclining chair which embraces every convenience and comfort for the sick-room.

ANSWERS TO QUERIES.

[1012.]—Brewster should let a shower of very fine sand fall on his fish in the Aquarium, and they will rub themselves clean on it. It is better first to remove all the fish out and clean the tank of all decaying matter, and replace the gravel with fresh washed stones. Fish kept in bad water before you obtained them might be diseased and affect all the rest.

[1013.]—Pipe bends are made either by filling the pipe with resin or lead first, and after they are bent running it out again. The flexible mandril, however, is coming into general use; it is a spiral wire which is introduced into the pipe, and after the bending is performed, it can be screwed out without any difficulty.

NOTES ON CURRENT TOPICS.

TROPICAL AFRICA.

LIEUT. CAMERON, who arrived in Liverpool last month, has, in one journey, done, perhaps, more and better service to geographical science in Central Africa than any single explorer, with the exception of Livingstone. In one important respect, in the accuracy of his observations, he excels them all. After thoroughly surveying the lake Tanganyika, Lieut. Cameron started northward and explored the head waters of the Congo, an immense river system, one of the feeders of which is the Lualaba, which drains Lake Tanganyika into the Congo, and which Livingstone erroneously believed to be a tributary of the Nile. Twelve hundred miles of this journey were over wholly undiscovered country, which is described as well watered, healthy and extremely fertile, capable of colonisation by Europeans, and rich in gold, iron and copper. The extent to which the Congo and its tributaries are navigable is very important. They constitute, Lieut. Cameron considers, one of the most magnificent systems of internal water communications in the world. As to the wealth of the newly-explored country, he describes it as unspeakably great, adding the opinion that from its mineral resources and agricultural capabilities, it will become one of the granaries of the world, a centre of civilisation and productive trade, and the scene of iron manufactures when other parts of the world have been exhausted. It is interesting that this tract of equatorial Africa, so long a blank on our maps, and believed to be an arid waste, or at all events a region of fen and swamp, should turn out to be one of the most inhabitable parts of the globe.

THE number of degrees conferred in the United States last year proclaims the Americans the most fearfully and wonderfully educated people in the world. There were 3,520 degrees in course; 441, honorary; 362, agriculture; 563, female, and 630 divinity—8,859 degrees in all.

MOths IN CARPETS.—Moths will work in carpets in rooms that are kept warm in winter as well as in summer. A sure method of removing the pests is to pour strong alum water on the floor to the distance of half a yard around the edges before laying the carpets. Then once or twice during the season sprinkle dry salt over the carpet before sweeping. Insects do not like salt, and sufficient adheres to the carpet to prevent them alighting upon it.