

rubbed on a sieve. The result will be as with the potatoes: a milky liquor will pass through the cloth; and woolly fibre will remain within it. The liquor, on settling, will deposit starch, and the clear liquor will be found, when boiled, to deposit albumen. The starch must, as before directed, be washed and dried.

#### Other Sources of Starch.

It may be produced from horse-chesnuts by proceeding in the same manner as with potatoes. It is also produced from sago. The celebrated "Glenfield Patent Starch" is solely manufactured from sago.

The occurrence of starch is not confined to the vegetable kingdom. According to Dr. G. Budd, granules of starch have been found in the brain; in certain cases of scrofulous caries, the liver assumes the peculiar hard, semi-transparent, waxy appearance described by him. Virchow has shown this condition to arise from the deposition of aneloid matter in the gland; and a similar deposit has been found in the kidney in the same cases. The accumulation of small quantities of starch in the animal tissues, even in health, is not uncommon.

#### Tests for Starch.

Starch produces an intense blue colour when it meets free with iodine. A solution of tannic acid occasions a precipitate in one of starch. Dilute a drop of starch solution, and add to it a little of tincture of iodine. The solution will acquire a deep-blue colour. If the liquor is boiled the colour disappears, but it returns when allowed to cool. If boiled with dilute sulphuric acid, starch quickly loses its viscosity, and is ultimately converted into glucose. If the tincture of iodine is dropped on flour, potatoes, and other amylaceous compounds, it produces this characteristic blue colour.

## Useful Receipts.

#### To take Fac-similes of Signatures.

Write your name on a piece of paper, and while the ink is wet sprinkle over it some finely powdered gum arabic, then make a rim round it, and pour on it some fusible alloy, in a liquid state. Impressions may be taken from the plates formed in this way, by means of printing ink and the copperplate press.

#### Liquid Glue.

Dissolve 1 lb. of best glue in 1 lb. of water; add gradually 1 ounce of nitric acid of sp. gr. 1.36; and heat the mixture for a short time. This will save the trouble of heating the glue-pot.

#### To fasten Knife-handles.

The *Chemical Gazette* says: "When knives and forks have come off the handles from being carelessly put into hot water, or otherwise, a cement made as follows will be useful to re-fasten them: Take of shellac two parts, and prepared chalk one part; reduce them to powder and mix thoroughly. Fill the opening in the handle with the mixture, heat the shank of the knife and press it in."

#### Organic Poison in Rooms.

Dr. Richardson, an English chemist, says that iodine, placed in a small box, with a perforated lid, destroys organic poison in rooms. During the continuance of an epidemic small-pox in London he saw the method used with benefit.

#### Copying Paper.

Mix lard and lamp-black to a paste, rub this over paper, wipe off the waste with a rag, and dry the paper. A clean sheet placed under this while written on with a lead pencil, &c., receives a copy.

#### Oiled Paper.

Brush paper with boiled oil and dry the sheets. Used to enclose paste blacking, white lead, &c.

#### Flexible Paints.

Boil 1½ lb. of yellow soap with 1 gallon of water, and mix while hot with 140 lbs of oil paint. Used to paint on canvass.

#### Papier Mache.

Paper pulp pressed into various forms with size, glue, white of egg, paste, &c. When painted or japanned they are light elegant ornaments, quite waterproof.

#### Benzine as an Insecticide.

A mixture of ten parts benzine, five parts soap, and eighty-five water, has been very successfully used by Gille to destroy the parasites which infest dogs. It has also been used with good results in veterinary practice, as an application in certain diseases of the skin; and thus diluted, is found to answer better than when pure.

#### Gum Paste.

Gum arabic, with a little gum tragacanth, made to a thick solution. Used to attach labels to bottles, book-backs, &c.

#### Map Colors.

*Yellow*.—1. Dissolve gamboge in water. 2. Make a decoction of French berries, strain, and add a little gum arabic.

*Red*.—1. Make a decoction of Brazil dust in vinegar, and add a little gum and alum. 2. Make an infusion of cochineal, and add a little gum.

*Blue*.—A weak mixture of sulphate of indigo and water, to which add a little gum.

*Green*.—1. Dissolve crystals of verdigris in water, and add a little gum. 2. Dissolve sap green in water, and add gum.

#### Furniture Paste.

Wax and turpentine coloured with alkanet. Sometimes soap, liquor potassæ, or pearl-ash is added, at the option of the maker.

#### Razor Paste.

1. Prepare putty powder, 1 oz.; oxalic acid, ½ oz.; gum, 20 grains; powder and make into a paste.

2. Emery in finest powder, 2 parts; spermaceti ointment, 1 part; mix.

3. Colcothar and emery made into a paste with lard.