Practical Receipts.

Prepared by a German Chemist for the Scientific American.

New Method to obtain Starch without Fermentation.

The flour is mixed with a sufficient quantity of water to have a consistency somewhat more solid than the dough for making bread. No more should be mixed at once than is necessary for half a day's work. The manufacturer now takes a quantity of the dough, perhaps 10 or 12 lbs. upon an oval wire sieve, which is placed over a barrel or cask, and before or under the faucet of a recipient containing water. Through the perforated head of the faucet a well divided stream of water is permitted to run on to the flour. In the commencement the water is suffered to run only slowly on it, but as soon as the starch commences to separate and the dough assumes a greyish appearance, the latter has to be worked more quickly until nothing but the gluten remains in your hands. If the dough is badly prepared, as full of bran, it will spread all over the sieve and permit nothing to run through. In such a case it is necessary to throw the whole mass again into the water, stir it up, and to bring it anew upon the seive. The water used must be cold of course, and if it is needed only about four times the quantity of the dough to be washed. Two hands can wash a thousand pounds of flour a day and will receive from it 550 pounds of fine starch and 300 lbs. of gluten This latter substance, which was entirely lost in the former process of manufacturing starch, is obtained by the above method in so pure a state that it be usefully applied to many purposes. Mixed with potatoe meal or starch it will produce a superior bread, and mixed with bran a superior article for fattening hogs or beef cattle. In a fresh state gluten is a substitute for yeast. Left standing with water under occasional stirring for 8 or 10 days, it will give a very superior paste for binders or for finishing cotton and linen stuffs. Mixed with the wash water from potatoe starch it will set the latter in fermentation, and decomposing the saccharine matter of it will form alcohol which is gained by distillation.

Observations on Yeast.

Dr. Lieddendorff, desirous to decide the question, whether Yeast is an organized substance, and if so, whether it caused subsequently fermentation as such, made the following experiment :—

He rubbed and triturated upon glass a portion of yeast so perfectly, that he could not detect under the microscope a globular texture. Two parts of grape sugar were then each separately dissolved in ten parts of water. To one solution was added the pulverized yeast, and to the other a corresponding quantity of yeast in its primitive state. Both mixtures were exposed to a temperature of 28° R. The solution containing the unpulverized yeast, commenced to ferment in half an hour and the reaction continued without cessation for two days when all the sugar was decomposed. In the meanwhile the mixture containing the pulverized, and thus disorganized yeast, did not exhibit a single gas bubble.

Chinese Fine Paint Brushes.

The Chinese use for spreading their oil colors, a brush which resembles our crayons or lead pencils They enclose more or less bristles of wild hogs compressed in a wooden handle, and to have a hard or soft brush they chip off more or less of the wood. With these brushes a very intimate connection of the different shades is produced, and to this application the peculiarity of their choice oil paintings may be ascribed, viz. that they appear to be glazed.

The Germs of Peas and Beans.

The Chinese eat the germs of peas and beans when green vegetables commence to be scarce. They produce them in the following manner. These leguminous fruits, in a dried state, are soaked for four hours in a dish containing water and are afterwards covered with straw. The germs or sprouts will reach in two days a length of an inch and a half. They are then freed from the remnants of the seed, and either stewed in beef or mutton broth, or else boiled in water and served up in the shape of a salad.

Brushes made of Quills.

Badin manufactures Brushes in Paris, of Quills, which he splits by a mechanical process into thin strips or slices resembling very much in appearance bleached bristles. Besides the neat appearance of this article it possesses the great advantage over the common hair or whalebone brush, that its single fibres are more dense and solid, while the bristle, which represents a hollow tube, is apt to become dull and soft by continued use, forming a bunch of small hair on the extremity of each.

New Method of making Chloride of Lime

Take some slaked lime and pour some chlorine water upon it. The chlorine of the latter is immediately absorbed by the lime, and you can pour off the supernatant water and replace it by a second quantity of chlorine water so as to saturate thoroughly every particle of lime with chlorine. The preparation is best preserved in a liquid state in well closed vessels.

Manufacture of Sulphuric Acid without Lead Chambers.

M. Schneider has announced that he has discovered a new process to change sulphurous acid, merely through the means of pourous substances, amongst which he finds the most convenient and best adapted to be pumice stone, into sulphuric acid of 60° B. gravity. He is convinced that this method can be applied to the wholesale manufactory, and that it will offer great advantages as far as cost and labor are concerned, over the formerly used process.

Hints for Pianists.

Have your piano forte tuned at least four times a year by an experienced tuner · if you allow it to go too long without tuning, it usually becomes flat, and troubles the tuner to get it to stay at the concert pitch, especially in the country. Never place the instrument against an outside wall or in a cold or damp room, particularly in a country house ; there is no greater enemy to a piano-forte than damp. Close the instrument immediately after your practice ; by leaving it open dust fixes on the sound board, and corrodes the movements, and if in a damp room, the strings soon rust. Should the piano-forte stand near or opposite to a window, guard, if possible, against its being opened, especially on a wet or damp day ; when the sun is on the window draw the blind down. Avoid putting metalic or other articles on or in the piano-forte ; such things frequently cause unpleasant vibrations, and someimes injure the instrument.

Houses of Unburnt Bricks.

Houses of unburnt bricks may be made perfectly wind and water proof by being covered externally with a thin coat of mastic which is prepared by mixing very coarse sharp sand, or sifted road drift, with dry White Lead and Litharge, beaten up with Linseed oil, and rendered sufficiently soft to work well with a towel. This plastering becomes in a short time so hard as to resist a nail, and will stand for an age without cracking or needing repair. For inside plastering sharp sand and lime mortar is sufficient ; papering the walls when dry.

To make a Looking-glass appear Broken.

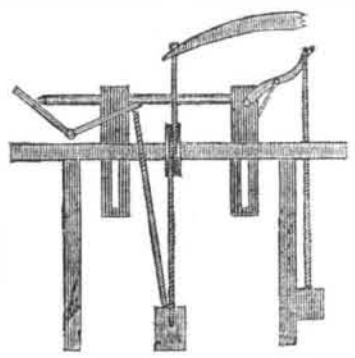
Take piece of soap and draw a curved stroke on the glass from top to bottom, and it will look exactly as if the glass was shivered. Many a tricky youngster has plagued his careful maiden aunt with a piece of soap rubbed over an old favorite looking-glass.

Spirit of Lavender.

Take of fresh lavender 2 pounds ; alcohol a gallon, water 2 pints. Mix them, and with a slow fire distil a gallon and a beautiful spirit of lavender is the result.

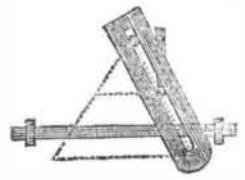
MECHANICAL MOVEMENTS.

Grandjean's Screw-Cutter.



This is a machine which was proposed and used in France during the last century, invented by a gentleman named M Grandjean, for cutting screws. The piece of iron to be cut was traversed by means of the bent lever on the left which was acted on by the treadle which gives the rotary motion by the cord round the pulley. Those who would cut the head off all improvements as infringements upon old principles, have just to compare the above with modern machinery for cutting screws.

Drawing Rule



Suppose the upper pin in the slot represented in the board part of the diagram stationary and the lower extremity of the piece moved in an horizontical direction, as shewn by the lower doted line, the second stud in the slot will also be moved in a straight line, guided by its connexion with that part of the apparatus seen behind, and the length or amount of traverse of the second point may be varied by altering its elevation.

Photographic Paper.

The art of Photography has been known for some time, and a peculiar preparation of paper named the Talbotype was somewhat well known in Paris and Germany, yet as the full particulars of the preparation was never publicly developed, our Patent Office granted a patent last year for the invention a : full account of which will be found in the report of Examiner Page, for last year.

The first part of the invention relates to the making of paper extremely sensitive to the rays of light, and for this purpose the best writing paper with the smoothest surface is selected.

PREPARATION OF PAPER.

One hundred grains of the nitrate of silver is dissolved in six ounces of distilled water, and with this, one side of the paper is washed with a soft camel hair brush. That side of the paper is marked to know it again and set to dry spontaneously in a dark place, after being dried, the paper is next dipped in a solution of the iodine of potassium, containing 500 grains of that salt dissolved in one pint of water. Only one or two minutes is allowed for the paper to be in this solution, when it is taken out, dipped in water, lightly pressed between clean blotting paper, and left to dry in the atmosphere. This is called iodized paper, and when well made, is insensible to the action of lights, and will then keep for many years

SECOND PREPARATION OF PAPER.

This part should be deferred till the paper is wanted for use when it should be washed with the following prepared liquid :—

Dissolve one hundred grains of crystallized nitrate of silver in two ounces of distilled water. To this solution add one sixth of its volume of strong acetic acid ; let this mixture be called A. ; dissolve crystallized gallic acid in distilled water, as much as it will dissolve (which is a very small quantity;) let this solution be called B. When you wish to prepare a sheet of paper for use, mix together the liquids A. and B. in equal volumes. This mixture is called by the name of gallo-nitrate of silver. Let no more be mixed than is intended to be used at one time, because the mixture will not keep good for a long period. Than take a sheet of iodized paper and wash it over with this gallo-nitrate of silver with a soft camels hair brush, taking care to wash it on the side which has been previously marked. This operation should be performed by candle light, let the paper rest half a minute and then dry it lightly with bloting paper. When nearly or quite dry, the paper is fit for use : but it is advisable to use it within a short time after its preparation.

The paper thus prepared, is called talbetype. it is placed in a camera obscura, so to receive the image formed in the focus of the lens. Of course, the paper must be screened or defended from the light during the time it is being put into the camera ; when the camera is properly pointed at the object this screen is withdrawn, or a pair of internal folding doors are opened, so as to expose the paper for the reception of the image. If the object is very bright or the time employed sufficiently long, a sensible image is perceived upon the paper, when it is withdrawn from the camera. But when the time is short or the objects dim, no image whatever is visible upon the paper which appears entirely blank Nevertheless, it is impressed with an invisible image, and the means of causing the image to become visible is performed as follows :—

Take some gallo-nitrate of silver, prepared in the manner before directed, and with this liquid wash the paper all over with a soft camel's hair brush, then hold it before a gentle fire, and in a short time, varying from a few seconds to a minute or two, the image begins to appear upon the paper. Those parts of the paper upon which light has acted the most strongly, become brown or black while those parts on which light has not acted, remain white. The image continues to strengthen and grow more and more visible during some time ; when it appears strong enough, the operation should be terminated, and the picture fixed.

(*Conclusion next week.*)

Visible and Invisible.

Write with French chalk on a looking-glass ; wipe it with a handerchief, and the lines will disapear ; breathe on it, and they will reappear. This alteration will take place for a great number of times, and after the lapse of a considerable period.

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