

## Practical Recelpts.

Prepared by a German Chemist for th Scientific American.

## New Met

The flour is mixed with a sufficient quantity of water to have a consistency somewha roore solid than the dough for making bread No more should be mixed at once than is ne cessary for half a day's work. The manufac turer now takes a quantity of the dough, per haps 10 or 12 lbs. upon an oval wire sieve which is placed over a barrel or cask, and be fore 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 pound of fine starch and 300 lbs . of gluten Thi latter substance, which was entirely lost in the former process of manufacturing starch is obtained by the above method in so pure 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 tresh state gluten is substitute for $y$ east. Left standing with wa ter under occasional stirring for 8 or 10 days, it will give a very superior paste for binder or for finishing cotton and linen stuffs. Mixed with the wash water from potatoe starch it will set the latter in fermentation, and de composing the saccharine matter of it wil form alcohol which is gained by distillation.

Observations on Yeast.
Dr. Lieddendorff, desirous to decide the question, whether Yeast is an organized sub stance, and if so, whether it caused subse quently lermatatalion as such, made the fol lowing experiment :-
He rubbed and triturated upon glass a por tion of yeast so perfectly, that he could no detect under the microscope a globular tex ture. Two parts of grape sugar were then each separately disqolved in ten parts of wa ter. To one solution was added the pulveri zed yeast, and to the other a corresponding quantily of yeast in its primitive state. Buth mixtures were exprized to a temperature o $28^{\circ} \mathrm{R}$. The solution containing the unpulve rized yeast, commenced to ferment in half an hour and the reaction continued without ces sation for twe days when all the sugar wa decomposed. In the meanwhile the mixture containing the pulverized, and thus disorgani zed yeast, did not exhibit a single gas babble

Chincse Flue Pathe miaskes.
The Chinese use 'or spreading their oil co lors, a brush which resembles our crayons or lead pencils They encluss more or less bris thes of wild hogs compresed in a woode handle, and to have a hard or soft mush the; chip off more ar less of the wood. Weit these brushes a very intirate comection of the different shades is mroduced, and to this an plication the feculianty of their choice ol paintings may be ascribed, viz. that they an pear to be glazed.

The Germs of Peas and Eeans.
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 conraining water and are afterwards covered with straw. The germs or sprouts will reach in two days a length of an inch and a half. Thes are then freed from the remnants of the seed, and either stewed in beef or mutton broth, or else oiled in water and served up in the shape ot a salad.

Brushes made of Quills.
Badin manufactures Brushes in Paris, of Quills, which he splits by a mechanical proeess into thin strips or slices resembling very rnuch in appearance bleached bristles. Beides the neat appearance of this article it posesses the great advantace over the common hair or whalebone brush, that its sing!e fibres are more dense and sold, 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.
ew Method of making Chioride of Lime Take some slaked lime and pour some chlo. ine water upon it. The chlorine of the latter is immediately absorbed by the lime, and you can pour off the supernatant water and eplace it by a second quantity of chlorine wa. r so as to saturate thoroughly every particle of lime with chlorine. The preparation is est preserved in a liquid state in well closed vessels.

## Iantactare or Suiphuric Acid withont

 Lead Chambers.M. Schneider has announced that he has discovered a new process to change sulphurous acid, merely through the means of pourus oubstances, amongst which he finds the most convenient and best adapted to be pumice stone, into sulphuric acid of $80^{\circ} \mathrm{B}$. gravity. He is convinced that this method can e 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 Planists.
Have your piano forte tuned at least four imes a vear by an experienced tuner - if you allow it to go too long without tuning, it usually becomes flat, and troubles the tuner o get it to stay at the concert pitch, especialy in the country. Never place the instrument against an outside wall or in a cold or damp room, particularly in a country house ; here is no greater enemy to a piano-torte than damp. Close the instrument ammediately 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 oon rust. Should the piano-forte stand near or opposite to a wirdow, guard, if possible, gainst its being opened, especially on a wet or damp day; when the sun is on the window draw the bliind down. Avoid putting metalic or other articles on or in the piano-forte uch things frequently cause unpleasant vibrations, and someimes injure the instrument.
ouscs of Cnbarnt Bricis
Hcuses of unburnt bricks may be made perfectly wind and water proof by being overed externally with a thin coat of mastic which is prepared by mixing very coarse harp 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 be comes in a short time so hard as to resist a nail, and will stand for an age without crack ing or needing repair. For inside plastering sharp sand and lime mortar is suflicient ; pa pering the walle when diy

To make a luoding-zass appear bromen Tale piese of soap and draw a curved troke on the glas: from top to bottom, and it will look exactly as if the glass was stiver fd. Mary o tricicy quangster has playded hi caretal maiden aunt with a piece of soap ruabed over an old favorite looking oflas.

5 pirit of Lavender
Tabe of tresh lavender 2 pounds ; alcoho galion, water 2 pints. Mix them, and with a slow fire distila gallon and a beautiful spiri of lavender is the result

## meChanical movements.

 Grandjcan's Screw-Cutter.

This is a machine which was proposed an used in France during the last century, inven ted by a gentleman named M Grandjean, fo 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 th head off all improvements as infringements upon old principles, have just to compare th above with modern machinery tor cuttin screws.


Suppose the upper pin in the slot represened in the board part of the diagram stationary and the lower extremity of the prece 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 th apparatus seen behind, and the length or amount of traverse of the second point may be varied by altering its elevation

## Photogrpphic Paper.

The art of Photography has been known for sume 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 patent last year for the invention a : full ac count of which will be found in the repert 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 wriling paper with the smoothest surface is selected.
preparation of paper
One hundred grains of the ritrate of silver is dissolved in six ounces of distilled water and with this, one side of the paper is wash ed 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, a ter being dried, the paper is next dipped in a solution of the iodine of potassium, containıng 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 call ed iodized $\rho$ aper, and when well made, is insensible to the action of lights, and will then keep for many years
scond ppeparation or paper
This part should be deferred till the paper is wanted for use when it should be washed with the following prepared liquid:-
Disselve one hundred g ains of erystallized hitrate of silver in two ounces of distilled water. To this solution add one sixth of its rolume of etrong acetic acid; let this mixture be called A.; disselve crystallized gallic acid in distilled viater, as much as it will disyolve (which is a very small quantity;) let this sohation be called B. When you wish to prepare asher of paper for ase, mix together the liquids $A$. and $B$. in equal volumes. This mixturc is called by the name of gailo-nitrate of silver. Let no more be mixed than is intended to be used at one time, because the
mixture will not keep good fur a long period Than take a sheet of iodized paper and wash over with this gallo-nitrate of silver with 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 ht 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 lelis. 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 colding 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 rom the camera. But when the time is shor 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 fol lows:-

Take some gallo-nitrate of silver, prepared in the manner before directed, and with this liquid wash the paper all over with a sof 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 act ed the most strongly, kecome brown or black while those parts on which light has not act ed, remain wihite. The image continues to trengthen and grow more and more visibl during some time; when it appears strong nough, the operation should be terminated and the picture fixed

## (Conclusion next week.)

## Visible and invisible

Write with Fiench chalk on a looking.glass wipe it with a handerchief, and the lines will disapear ; breathe onit, and they will re appear. This alteration will take place for great number of times, and after the laps of a considerable period


This paper, the most popular publication the kind in the werld, is published weeki At 128 Fulton Street, New York, and 13 Court Street, Boston,

## BY MUNN \& COMPANY

The principal office being at $\mathcal{N}$ ew Yorík.
The SCIENTIFIC AMERICAN is the Ad ocate of Industry in all its torms, and as a Journal for Mechanics and Manufacturers, is not equalled by any other publication of the kind in the world
Each number contains from FIVE to SE VEN ORIGINAL MECHANICAL ENGRA. VINGS of the most important inventions; catalogue of AMERICAN PATENTS, as is sued from the Pateat Office each week; not ces of the progress of all new MECHANI CAL and SCIENTIFIC inventions ; instruc tion in the various AR'TS and TRADES, with ENGRAVINGS ; curious PHILOSOPHICAL. and CHEMICAL experiments ; the latest RAILROAD FNIFHLJGFNCE in EUEOPE and AMERLCA; all the different MECHA. NICAL MOVEMENTS, published ina serie and ILLUSTRATED with more thats A HUNDRED ENGRAVKNGS, \&cc. Scc.
The Scientific American has already attained the largest cirenlation of any weekly me chanical journal in the world, and in this country its circulation s not surpasaed by all he other mechanical apers combined.
for-For terma see inside.

