

SCIENTIFIC MISCELLANY.

A recording thermometer described by an English physicist consists essentially of a flattened brass tube bent into a nearly complete circle eight inches across, and filled with cressote, one end of the tube being attached to a stand and the other to a lever moving a pen on a recording drum. A change of a Fahrenheit degree deflects the pen about an inch, a continuous record of the changes being marked on the paper covering the revolving drum. The thermometer is converted into a regulator for giving uniform temperature for days and weeks by substituting an electric contact for the pen, the closing of the circuit being made to turn on more current if the heating is by electricity or to regulate the gas supply if a stove is used. With such a regulator the temperature of a room containing a ruling engine was kept for five days at 69 degrees, with no greater deviation than a fifth of a degree.

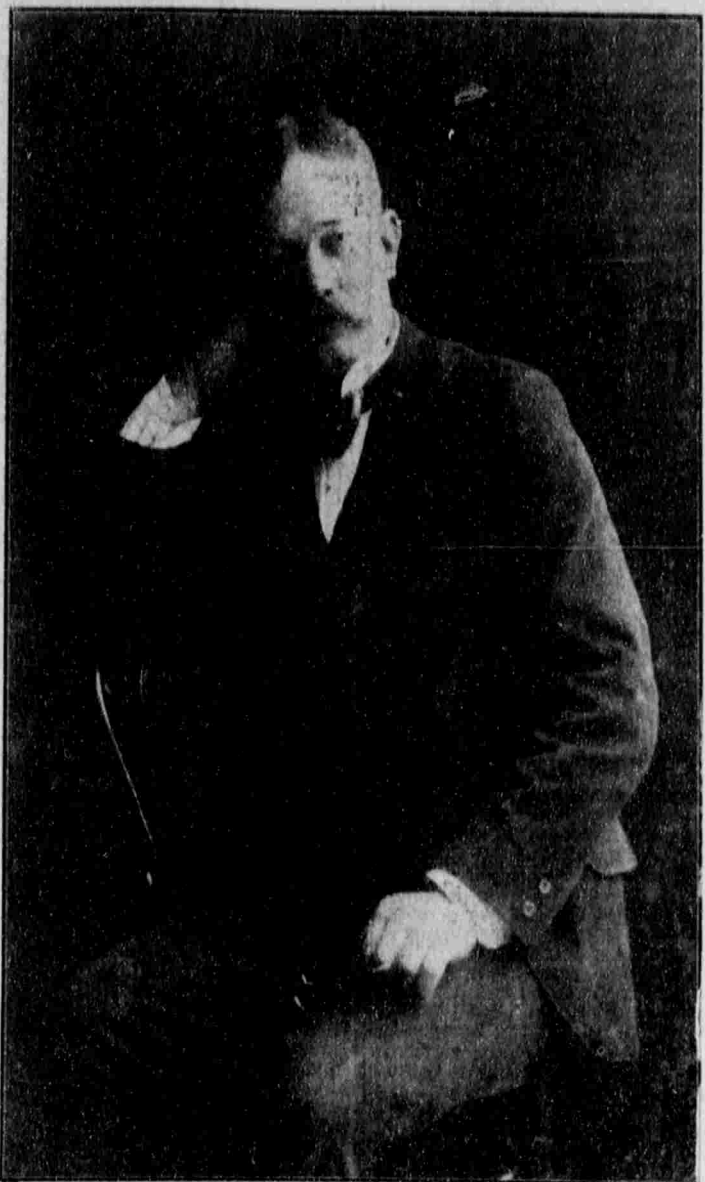
A curious failure of the gold used in British coinage has been brought to notice by Dr. T. K. Rose. This metal is an alloy of 91.5 per cent of gold and 8.5 per cent of copper, and it is made so brittle as to be unfit for use by the presence of minute traces of such impurities as tellurium, lead, bismuth, etc., although considerably larger quantities of the same elements, except bismuth, do not affect the ductility of fine gold. The effect of the impurities is counteracted by adding copper oxide.

Seeds of the castor oil plant are surprisingly common in Egyptian tombs. Prof. Lort, a recent French investigator, finds that some seeds from Thebes must be at least 3,000 years old, and from an ancient papyrus concludes that the oil was used for much the same purposes as now.

The Kew Herbarium, begun 50 years ago, is estimated to comprise considerably more than 2,000,000 specimens, attached to 1,300,000 sheets.

In his important experiments upon the resistance of road vehicles to traction, Prof. Hele-Shaw measures the pull upon a single wheel drawn behind a motor car. A motor frame six feet long is arranged for receiving any wheel to be tested, with weights for giving any desired load, and the pull exerted upon the wheel is transmitted by a system of levers to a hydraulic plunger, which through the compression of enclosed water moves the pen of the recording apparatus. This apparatus, carefully mounted to avoid vibration, includes a drum carrying a paper band 3/4 inches wide, with a pen near the edge of the paper that registers the tractive effort in pounds and a pen upon the other half that records the speed in miles through the revolutions of the wheels of the car. The tests thus far have shown that the pull is fairly proportional to the load, but with pneumatic wheels on a macadam road the increase with velocity was slight while it was rapid with iron-shod wheels running over paving stones.

Of the slugs, or lung breathing snails with too small or internal shells or none at all, about 1,000 species and 500 varieties have been described. Most of these have been brought together by Walter E. Collinge, an English collector, who



S. T. WHITAKER,
Director General of Utah Exhibits at the Louisiana Purchase Exposition.

shows specimens ranging in size from that of a grain of wheat to a length of several inches, and in coloring from dull, repulsive tints to the gorgeous hues of the butterfly. All slugs lay eggs, the numbers varying from 10 to 200 or more and the sizes from that of a pin-point to that of a sparrow's egg. A beautiful and very rare South African species is a veritable tiger among its kind, preying savagely on other slugs and on insects, and several other species are carnivorous and friends of gardeners.

The Arsenotherium, the new fossil monster of Egypt, had a head nearly a yard long, with a pair of small horns near the eyes and an enormous double

bony horn on the nasal region. Prof. E. Ray Lankester, however, finds that it differs from the rhinoceros and was probably descended from the early elephants.

For the polyglot technical dictionary of Dr. H. Jansen one and a quarter million words have been collected already, aid being given by German, French, English and American students.

Peat from the bog contains 85 per cent of water with only 15 per cent of combustible matter. To condense the material into an efficient fuel has long taxed the ingenuity of inventors, and Consul General Mason of Berlin re-

ports that the process of C. Schlickeyson has been worked since 1899, having been put in operation in Russia, Holland, Hungary, Switzerland and Germany, with constant improvement in details. The peat is ground, air-dried and kiln-dried until the water is reduced to 15 to 18 per cent. Pressing into briquettes with heat gives increased value, and another improvement is the addition of bituminous coal dust, anthracite culm or sawdust to the peat pulp. A more modern and

scientific process is that of Martin Ziegler. The peat is converted into coke in closed ovens, the waste gases furnishing heat for both the coking and the preparatory drying, and the product is a hard, black, smokeless fuel selling in Germany at an equivalent of \$10 to \$15 per ton. It is a high-grade coal, especially prized for various metallurgical purposes. Peat coke is now made at Reiskind, Russia, and extensive factories are to be established in Germany.

WHAT TO EAT.

Valuable Suggestions for the Kitchen and Dining Room.

This matter will be found to be entirely different from and superior to the usual run of food articles, in that every item is a nugget of culinary wisdom and eminently practical. Conducted by Katherine Kurtz, Marquette Building, Chicago, to whom all inquiries should be addressed. All rights reserved by Banning Co., Chicago.

Menus for Next Three Days.

SUNDAY.	
BREAKFAST.	
Cereal	Strawberries
Shad Roe	Broiled Tomatoes
Sally Lunn	Coffee
DINNER.	
Roast Lamb	Clear Soup
New Potatoes	Mint Sauce
Strawberry	Asparagus Salad
	Cake
SUPPER.	
Coffee	Cottage Cheese
Tongue Salad	Soft Gingerbread
	Sliced Figs
MONDAY.	
BREAKFAST.	
Cereal	Fruit
Broiled Mackerel	Cream
Toast	Chopped Potatoes
	Coffee
LUNCHEON.	
Plain Macaroni	Stewed Tomatoes
Fruit	Coffee Cake
DINNER.	
Cream of Corn Soup	Escalloped Potatoes
Cold Sliced Mutton	String Beans
Egg Salad	Caramel Custard
	Coffee
TUESDAY.	
BREAKFAST.	
Cereal	Fruit
Prized Beef	Cream
Waffles	Maple Syrup
	Coffee
LUNCHEON.	
Creamed Lobster	Baked Potatoes
Hot Rolls	Cocoa
DINNER.	
Clear Soup	Rice
Smothered Chicken	Sliced Tomatoes
Strawberry Shortcake	Coffee

What Can Be Done With Gooseberries.

The gooseberry is one of our best known garden fruits, having been extensively cultivated since the Middle Ages, when it was favored by emperors as a table dainty. Its virtues, extolled by such writers as Theophrastus, Pliny, and esteemed by all for its agreeable flavor.

Found growing wild as a prickly shrub in the hillside of Europe, Asia and America it has, under careful cultivation, been brought to a state of high perfection in flavor as well as size. It thrives in countries of temperate climate, as it requires cool, moist atmosphere to produce the best fruit. For this reason the English gooseberry is the finest, the berries growing as large as plums.

From the two original varieties have been produced the new kinds known as the hairy and the smooth skinned. When the berries are green, they are exceedingly tart and only fit to us for jelly or a sauce to serve as a very appetizing dish with cold meats.

When they are fully ripe they contain a large per cent of sugar, more, in fact, than most any other fruit. They are wholesome, and because of the amount of sugar contained when mature, they may be classed with the food fruits, rather than with the flavor-fruits, as they stand like grapes—intermediate between the two groups. The acids of gooseberry—citric and malic—are both wholesome and agreeable and greatly modified, in the ripe berry, by the sugar which is contained to the amount of 6 or 8 per cent while there is about 14 per cent of the acids present. Our grandmothers used to preserve a large amount of these berries, as they found them a delightful accompaniment to the roast pork, game and poultry. In the winter, when the season for the ripe fruit many were the ways of serving them in dessert form. Unfortunately the recipes of these tasty dishes have not been handed down, even in manuscript and only the memory of their goodness remains at all distinct in our minds.

Gooseberry Souffle.

Put the gooseberries in a double boiler with just enough water to start them, and cook them until well done, sweeten to taste, and press through a sieve. To a pint of the pulp add three well-beaten eggs and when the mixture is cool, fold in the whites beaten to a stiff froth; turn into a buttered souffle dish, sprinkle over the top with powdered sugar; place in a moderately hot oven and bake until it cracks open or about three-quarters of an hour. Serve at once from same dish.

Compote of Gooseberries.

Remove stems and blossoms from a quart of large ripe gooseberries, wash well in cold water, drain and put them in a preserving kettle, cover with boiling water and boil a few minutes, then drain off the water. Make a syrup with half a pound of granulated sugar and three-quarters of a cup of water, when it boils

clear put in the gooseberries and let boil up once, then take out the berries and put them in a glass dish. Add the syrup 10 minutes longer, add a little wine and pour over the berries and set away to cool.

Gooseberry Cream.

Clean and wash a quart of ripe gooseberries and put them on to cook with a little white wine, the peel of half a lemon and a small piece of stick cinnamon. When tender press through a sieve. Beat the yolks of six eggs very light with one and one-half cups of sugar, half a pint of orange and lemon juice, mixed, and a pint of the gooseberry pulp. Put into a double boiler and stir and cook until it thickens; remove from the fire and stir in the whites of the eggs beaten to a stiff froth. Heap in stemmed glasses and set away to cool.

Gooseberry Pudding.

Use green gooseberries for this. First make a sweet paste as follows: Chop quarter of a pound of best beef suet very fine, and stir into three cups of flour, which has been sifted with a teaspoonful of baking powder and a quarter of a teaspoonful of salt. Mix to a stiff paste with cold water—handle as little as possible; roll out like pie paste and line the sides of a pudding dish with it. Put in a quart of green gooseberries topped and stemmed, something in plenty of sugar and a little chopped, candied ginger root. Add a very little water, put a cover of the paste over it, folding the edges well together, tie the basin up in a cloth and place in a steamer or boiler of water and cook for two or two and a half hours. Serve without sauce.



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\$3.00 DRESS OR COAT	\$1.50
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\$3.50 DRESS OR COAT	\$1.75
for	
\$4.00 DRESS OR COAT	\$2.00
for	
\$5.00 DRESS OR COAT	\$2.50
for	
\$5.50 DRESS OR COAT	\$2.75
for	
\$6.00 DRESS OR COAT	\$3.00
for	
\$7.00 DRESS OR COAT	\$3.50
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for	
\$18.00 Suit or Costume	\$9.00
for	
\$20.00 Suit or Costume	\$10.00
for	
\$25.00 Suit or Costume	\$12.50
for	
\$30.00 Suit or Costume	\$15.00
for	
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for	
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for	
\$2.50 CHILDREN'S DRESSES	\$1.25
for	
\$3.00 CHILDREN'S DRESSES	\$1.50
for	
\$3.50 CHILDREN'S DRESSES	\$1.75
for	
\$4.00 CHILDREN'S DRESSES	\$2.00
for	
\$5.00 CHILDREN'S DRESSES	\$2.50
for	
\$6.00 CHILDREN'S DRESSES	\$3.00
for	
\$8.00 CHILDREN'S DRESSES	\$4.00
for	
\$10.00 CHILDREN'S DRESSES	\$5.00
for	
\$12.00 CHILDREN'S DRESSES	\$5.50
for	
\$15.00 CHILDREN'S DRESSES	\$6.00
for	
\$20.00 CHILDREN'S DRESSES	\$7.50
for	
Etc., Etc.	

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for	
\$2.00 SKIRTS	\$1.00
for	
\$2.50 SKIRTS	\$1.25
for	
\$3.00 SKIRTS	\$1.50
for	
\$4.00 SKIRTS	\$2.00
for	
\$5.00 SKIRTS	\$2.50
for	
\$7.00 SKIRTS	\$3.50
for	
\$10.00 SKIRTS	\$5.00
for	
\$15.00 SKIRTS	\$7.50
for	
\$20.00 SKIRTS	\$10.00
for	
\$30.00 SKIRTS	\$15.00
for	
\$50.00 SKIRTS	\$25.00
for	
Etc., Etc.	

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for	
\$1.50 Tea Gown or Wrapper	75c
for	
\$2.00 Tea Gown or Wrapper	\$1.00
for	
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for	
\$3.00 Tea Gown or Wrapper	\$1.50
for	
\$4.00 Tea Gown or Wrapper	\$2.00
for	
\$5.00 Tea Gown or Wrapper	\$2.50
for	
\$7.00 Tea Gown or Wrapper	\$3.50
for	
\$8.00 Tea Gown or Wrapper	\$4.50
for	
\$10.00 Tea Gown or Wrapper	\$5.50
for	
\$12.00 Tea Gown or Wrapper	\$6.00
for	
\$15.00 Tea Gown or Wrapper	\$7.50
for	
\$20.00 Tea Gown or Wrapper	\$10.00
for	
Etc., Etc.	

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50c WAISTS	25c
for	
75c WAISTS	38c
for	
\$1.00 WAISTS	50c
for	
\$1.25 WAISTS	63c
for	
\$1.50 WAISTS	75c
for	
\$1.75 WAISTS	88c
for	
\$2.00 WAISTS	\$1.00
for	
\$3.00 WAISTS	\$1.50
for	
\$4.00 WAISTS	\$2.00
for	
\$5.00 WAISTS	\$2.50
for	
\$6.00 WAISTS	\$3.00
for	
\$7.00 WAISTS	\$3.50
for	
\$8.00 WAISTS	\$4.00
for	
\$10.00 WAISTS	\$5.00
for	
\$15.00 WAISTS	\$7.50
for	
Etc., Etc.	

Ladies' and Childrens' Coats and Wraps.	
\$2.50 COAT OR WRAP	\$1.25
for	
\$3.00 COAT OR WRAP	\$1.50
for	
\$3.50 COAT OR WRAP	\$2.50
for	
\$4.00 COAT OR WRAP	\$3.00
for	
\$5.00 COAT OR WRAP	\$4.00
for	
\$10.00 COAT OR WRAP	\$5.00
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\$15.00 COAT OR WRAP	\$7.50
for	
\$20.00 COAT OR WRAP	\$10.00
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for	
\$2.00 Sacque or Kimona	\$1.00
for	
\$2.50 Sacque or Kimona	\$1.25
for	
\$3.00 Sacque or Kimona	\$1.50
for	
\$4.00 Sacque or Kimona	\$2.00
for	
\$5.00 Sacque or Kimona	\$2.50
for	
\$7.00 Sacque or Kimona	\$3.50
for	
\$10.00 Sacque or Kimona	\$5.00
for	
\$15.00 Sacque or Kimona	\$7.50
for	
Etc., Etc.	

Ladies' Petticoats.

50c Ladies' Petticoats	45c
for	
\$1.25 Ladies' Petticoats	63c
for	
\$1.50 Ladies' Petticoats	75c
for	
\$2.00 Ladies' Petticoats	\$1.00
for	
\$2.50 Ladies' Petticoats	\$1.25
for	
\$3.00 Ladies' Petticoats	\$1.50
for	
\$4.00 Ladies' Petticoats	\$2.00
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\$5.00 Ladies' Petticoats	\$2.50
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for	
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