By ALBERT S. GRAY, M.

(Copyright, 1914, by A. S. Gray VITAMINE FOODS.

The fundamental differen plants and animals is in their set of feeding. Plants are essentialy structive and work up for theselves the simplest inorganic elemens into food. Animals, on the other had, are essentially destructive and on make use of these same elements on by destroying the combinations arraged by the plants and recombining ad ex-creting them in such forms agare abcreting them in such forms agare ab-solutely useless for animal fed until they are once more worked u by the plants. All the carbohydres, the starches and sugars, all the itrogen compounds and the proteins re ulti-mately provided. mately provided for the who animal world by the plant world. Oviously, we have here a cycle analogs to cy-cles to be found everywhere brough-out nature, from which we ay—but seemingly will sol-learn. I this cy-cle the animal ? sound to bearsaitic. arasitic, pelessly and man is about the most spelessly parasitic of all, because his ablime egotism blinds him to the fa that he is but a single link in an hensible chain of universal l

In our ignorance we have esumed to interfere with nature's pas, with dire results, and only versecently have we generally begun suspect that the key to the solution of our serious ills, both physical a social, and covering disease, porty and crime, is to be found in a correhension of the subject of nutrit. Very obviously, then, the study osutrition is worth while and must be at the foundation, with the breams and drinking of plants and theleactions to light heat and grantiation. to light, heat and gravitatio

Eykeman in 1892 called ention to a peculiar relationship been beriberi and polished rice, and followed it up from time to time forme fourton quite definitely provi corticle layer of rice conts a subtance which cures beri-t in man and the polyneufitis that produced in birds by feeding them polished rice. Then Casimir Funk 1911 isolated from the material and from the surface of rice in polisic it a def-inite crystalline body wighich he cured polyneuritis induce pigeons by feeding them on ordin

Funk named this subsce "vita-mine," because it constit a subs-tance in foods indispense to life. The vitamines are contait in the hard, colored shell that fround off rice to produce a nice we product, and it is in the hard protive coat of the wheat berry which institutes about 16 per cent of the in. The bran of the milling pro, as removed by the steel rolls, udes the aleurone layer, together with periods. carp, the tests and the h; these are starchless but rich in fund min-e-als, and besides they tain the newly discovered vitamin

The vitamines are nitrous bod-ies of highly complex sture and no diet is complete wat them.

volks of eggs. They around in whole grains, potatoes, cas beans, peas, lentils and the like; in lime most fatal disease that can and in other fresh fruit ju

Wherever any cereal ro of its colored alcurone or vita layer forms the chief food of a pt, there a deficiency disease api. The chief increase of bert-bert, sed by sating polished rice and ring in thousands of deaths annual Japan and other countries, coincid th the replacement of the primi stone grinding by the modern roller process. The stone mills ad the entire grain; the modern ronable the miller to reject from the prac-tically everything but the h.

A diet largely composed offized milk, condensed milk, colours. milk, condensed milk, colours, starch and sugar, or of any subjected for a long period toperatures above 250 degrees. ms considered vitamineless diet, ansuch, will predispose to tuberculosi the defense of these as deficiency diseases.

White flours, corn flour shed rice are deficient food

Annual Gathering of G The Oireschtas, the greenual gathering of Gaels, this Nook place in the lovely town on ank of Loch Lein. Killarney, besteing one of the most beautiful pla Ire-land, is situated in proximitone of the most Irish-speaking dis in country. The Irish spe a large proportion of the pop.
South Kerry, and the "kings
produced a number of the beautiers, and of the most entry
workers in the language most London Mail.

The Sleeper.

"European sleeping cars dear \$20 a berth, in fact-afford you the privacy of a b The speaker was Raymon He resumed: C.S Our sleeping cars, while ble enough, afford no priva fortable as they are, it is ver

sleep in them. "I was traveling one night ward. The berth above me cupled by a 100-pound broker.

of all the proof we still have amateur in high places, who persist in that white flour and polished rice are safe and healthful foods. White flours and polished rice are pure foods, but they are not wholesome foods, becausthey are not complete.

WHAT THE VITAMINES TEACH US

"We have done much to drive down the death rate in the way of bettering sanitation and such things, but in spite of all this our death rate for persons over forty is increasing."
writes Dr. Charles F. Bolduan, di
rector of the New York health depart ment's bureau of public health. And attention is called to the fact that overindulgence in proteins (meats, eggs, fish and the like) is a big factor in this increase in the death rate of persons over forty years of age.

Such statements are frequently eized with avidity by persons of more than average intelligence and passed from individual to individual, slightly embellished with each repetition, until they may become strong indorse-ments of one or more of the many socalled diet systems that every so often sweep over the country leaving a trail of invalids in their wake. It must be emembered that any marked change n diet or in cooking is certain to produce some result, and change itself is often a benefit; but a diet which adnirably suits one person who lives in a certain location and does a certain kind of work may not be adapted to another individual living under different conditions and doing a different kind of work. The truth of the matter is that man's chances of health are st when he cats with moderation a diet made up of clean, wholesome ordinary foods, well prepared in the usual ways. Such a diet should include some articles to be cooked and others to be eaten raw, such as bread. cereals, fruits, vegetables, meat, fish, milk, butter, cheese and eggs. these articles should be of good quality and free from all dirt, either visible or invisible, should contain no adulterations.

Apart from overeating of protein probably the greater part of our troubles comes from the loss of important elements from our foods in preparing or preserving them. These losses have been due to the fact that either we do not know the elements are present or we assume the very minute quantities to be of no conse quence. We are only just beginning to grasp the real truth through a study of the enzymes, the catalyzers, the vitteen years. Gryns joined the quest of the enzymes, the catalyzers, the vit-in 1910, and in 1911 Present Stan-ton quite definitely provethat the of the ductless glands in the body.

This world is adjusted to operate under the driving power of full sunlight. We have noted that Indian corn, for example, grew within a certain period to 25 inches under white glass and in the same period of time only 18 inches under red glass, eight inches under green glass and six inches under The several glasses used in these experiments checked and held back part of the sun energy, as can easily be demonstrated by holding a sheet of white and of colored glass in the hand out in sunlight-the colored glass will become sensibly warmer than the white glass. It is very evident that abstracting from white light dive coat a part of the waves produces material nanges in plant life. We know that plants cannot thrive and grow wit light, and that it is only in the light, with a supply of the atmospheric gases and of water, and with the green chlorophyl bodies in a healthy condition, that the manufacture of food can go on. We also know as the result of simple experiments that certain solutions of mineral matter must be present to enable the plant to manufacture food. Seedlings can be grown in glass jars, some in distilled Vitamines are found in its, and which is devoid of any minerals, otherspecially in their seeds. ar as is ers in distilled water with one or two known at present, animals incap or all of the necessary saits in solu-able of making them and in them tion, in order to prove the general only by feeding on plants tamines facts of nutrition and draw very close occur in meat, fresh milk in the analogies between life in that plane

Let us consider what is perhaps the most fatal disease that can overtake a plant-chlorosis, or the lack of color ing matter. This disease in all its es-mentials is very similar in anemia in the human being. Chlorosis is an obscure disease, but in most cases it appears to be caused by a lack of iron Without Iron the human blood is not red nor are plant granules green. Generally the seedlings attacked by the disease die out very early, but some times sickly whitish leaved specimer struggle slong for a little while. The disease is often local and in compound leaves one leaset here and there may be entirely colorless. It is this type that gives us the gardeners' "varie gated" varieties where the leaves are mottled or striped with cream colored patches and bands. The green parts there do enough work to carry on the life of the individual while the color less parts are nonproducers. If this is not carried too far the plants can be quite healthy, but if the attempt is the vitamines have been rad in made to breed an entirely white race the milling process. But in face it will die of malnutrition.

> impossible to slumber anywhere with in a half-mile radius of that broker, and at about two in the morning I climbed up to him, took him by the shoulders and shook him rudely.

> What do you mean, he growled by waking me out of a sound sleep?" "Sut it's such an ugly sound," said I. It's such an ugly, horrible so that we other passengers positively re-fuse to tolerate it."—Washingtor fuse. Star.

> > Egypt's Worthy Ruler.

Egypt's Worthy Ruler.

Egypt would have lost a most capa his ruler had not the attack on the khediye happily failed. Abbas II is only forty, though he has reigned two and-twenty years. He is an accomplished linguist, conversing fluently in all the principal European tongues is strict in his attention to every duty of his office, eachews both alcohol and tobacco, and, though a Mohammedan is, like his father, a monogamist—the khediya being a beautiful Circansian Agriculture is the khediya's hobby, and his apacial pride are the model farm b has special pride are the model farm coround the Koubeh palace and the fine a stock of his stables and kennels.



N EXPEDITION to Mt. Wilson mountain is o.es. But the scenery was beight according to the geo-detic survey. The altitude is grand. There were fascinating views of Alpine peaks, some of them wooded 6,000 feet, which is a pardonable exaggeration. The trip involves a climb of 4,000 feet-vertical-which is accomplished in a tramp of nine miles from the terminus of the Sierra Madre cars of the Pacific Electric system This is called the Sierra Madre trail and is usually taken by foot passen gers or by those who choose to make burros or mules do the fatigue work, writes W. H. Knight in the Los Angeles Times.

But there is besides a so-called auto mobile roadway, of greater length and easier grade. It was built and is kept in good repair by the Carnegie institution for the transportation of building. material and also to bring up supplies to the astronomers, for although the latter devote their time to the contem plation of the heavens and seem to be dwelling in far-off celestial spheres, yet they are actually human and have cravings that can only be satisfied by consuming things of terrestrial growth.

Observatory Will Be Massive. Up this Carnegle road 200 tons of steel have been transported for the construction of the new mammoth ob servatory which is to house the great 100-inch reflecting telescope, and be-fore the observatory is completed that gigantic building will consume an additional 600 tons of structural steel. This will include the grand dome 100 feet in dismeter, whose topmost point will be 120 feet from the ground.

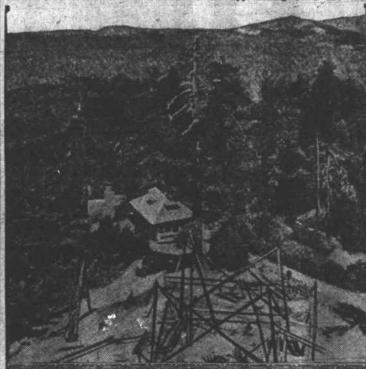
and doubly appreciated, for is no small undertaking. The there was not a trickle of water on mountain is 5,887 feet in the whole route.

> to the summit with giant pines and spruces, others hastioned by granite crags which pierced the clear blue sky, and on either hand deep verdure-clad canyons leading off through interminable vistas to other lofty mountain ranges. And a special charm of these beautiful scenes was their endless

At four o'clock, when the sun began to throw long shadows from the mag-nificent peaks across the dark canyons below, one of the party exclaimed: "Why, yonder is the tower telescope on the distant summit of Mt. Wilson," and it was still three miles away. At last, after ten miles of strenuous hiking, the camp was reached, and though all felt well paid by the fine scenery they had enjoyed, they were dublous about recommending the ridge trail to other pilgrims in quiring about the route.

Glimpse of Delavan's Comet. At 3:30 a. m. young Baumgardt, who is an enthusiast, summoned the enterprising members to rise and get a glimpse of Delavan's remarkable comet, which has now been visible to de tronomers for many months. It is midway between brilliant Capella and the Twins, Though but dimly visible to the naked eye it is flashed out with great beauty in Baumgardt's powerful comb-like tail but had then developed any long streamers.

Presently the comet began to fade will be by far the most massive build- in the approaching dawn and then



LOOKING FROM TELESCOPE TOWER

ing ever planned for, and devoted to, the party adjourned to Echo Rock to astronomical use.

The members of the Astronomy club climbed the trail under the direction A level stratum of cloud resembling

of Secretary Thomas P, Smith. Mr. molten gold adorned the summer Baumgardt, son of B. R. Baumgardt, lectured, and his friend brought up two fine portable telescopes which proved of great service on the moun-

But there was another party whose adventures are worth noting. It was conducted by Vallette L. Benedict The members of this little group ventured over another trail which proved to be full of surprises. They went up the Mt. Lowe electric road to Alpine Tavern, 5,000 feet elevation, and from there started for Mt. Wilson by ne of the standard forest trails along the dividing ridge.

Long and Tiring Hike. An optimistic signboard near the tavern reads "six miles," but who could suspect that it meant by air line, as the aeroplane files? After hiking along their serpentine course for two hours alternately climbing steep grades and dropping to lower levels, they came to another sign which read "five and one half miles." Overcome with the humor of the situation, they settled in a shady nook, opened out their noon lunch, which was washed down with a bottle of Bryan beverage thoughtfully provided by the presi-

Fun for Phonograph Owner.

They Who Know.

then a sphere of pure undazzling light rose as if it were a gigantic bubble issuing from the cloud. Words fail to express the exquisite beauty of the scene. It well compensated for the tollsome climb of the previous day and the broken slumbers of the morning. From Echo Rock the party over to the snow telescope, which lies prone, 100 feet in length, along the

edge of the cliff. The sun's rays are directed into it by an ingenious mechanism of two plane mirrors. The image of the sun, projected on a screen visible to all, is seven inches in diameter. Next they visited the great tower telescope near by. The massive double tower one within the other to prevent vibration of the inner one rises

150 feet from the ground where its four steel columns rest on piers which reach down to the granite base of the mountain. Beneath the surface is a pit 78 feet in depth at the bottom of which there is a chamber where the temperature is practically uniform, and the results of observations are accurately registered.

A remarkably durious experiment may be performed with any ordinary phonograph, the Strand says. singing songs backward; you hear the

and is nothing but a sharp "cessation of sound." Think of the long procession of dull people that you pass daily on the street, noticing them only as the drab back-

find them as stupid as bables do grown-ups yet these are they who know the secrets of the Seven Stars The and Plato's Year! They have solved sound box is reversed, so that the the long problem of work; they have needle slopes the other way, enabling irrigated deserts, washed down hills, the disk to be turned backward by the tunneled mountains, sailed strange finger being placed near the center, seas, controlled vast engines. They The effect produced is extremely as have also fronted death fearlessly and tonishing. You hear the human voice been convinced of immortality. They have also fronted death fearlessly and singing songs backward; plain in themselves infinite springs of tem-harmony of Wagner backward; plain in themselves infinite springs of tem-English language sounds like a Chin-derness to quench the flames of lust The most remarkable and greed. They have created new have looked at Love ashast and found in themselves infinite springs of teneffect is perhaps to play a chime of bodies and new souls. Lying in Ring's bells in this reversed manner. The houses or fouled in the mire, starved, ound rushes up and up-but there is gorged, scorched, frozen, lifted up never a single strike or clash of a heaven, cast down to hell—from all bell; the strike on the ear is reversed, this have they learned nothing?

Whatever may be said of "fall," the lexicons of a coroner's jury in Michigan certainly centain the word "fall ure," as witness the finding: "We th jury, find that the deceased came to ground for the young faces which, to his death from heart failure, super-you, shine out like stars, advises Cor- induced by speculation failure, which nella A. P. Comer in the Atlantic, was the result of failure to see far They seem unimportant folk, and you enough ahead."—Modern Merchant, PROPER USE OF WASTE FATS

Saved From Any Kind of Meat They Are Valued by the Economical

Have you ever noticed how enticing sweet potatoes are when served with Maryland pork and beans? Somehow the pork greases make them seem more like a dessert than a plain vege-

Neither cream. lard, butter, nor beef can take the place of pork fat for sweet potatoes. Pork fat also gives a tang to beets, parsuips and sich cannot be duplicated in

any other way. The waste fat from beef makes a better cake, a better ple crust and better candies than the highest priced butter. Cookies, puddings and cakes have a savoriness so enticing when made of beef drippings that not even the most delinquent appetite can say them nay.

hem nay. The fats, oils and greases from amb or veal all lend themselves to the economical housewife as a great improvement over costly butters and cheap lards for frying, broiling and preparing food in all sorts of other ways. One part of these fats will give a happier flavor to fish, beans. carrots and peas than ten times as much butter. Indeed, a spoonful of it will do the work of a whole pound of

Then there are the "grube," called by the Jewish cooks who re-move the fat and grease from geese and fry it with the goose flesh into crisp, brittle flat cakes. The grease from the geese and other fowl is widely used in Jewish homes. Some students think its use has much to do with the relative absence of wasting distempers among the people of this ancient nation.

#### **IDEAS FOR THE HOUSEKEEPER**

Seven Little Things of Moment With Which All of Them May Not Be Acquainted.

When it is necessary to boll a cracked egg add a little vinegar to the water. This will prevent the white from bolling out.

If you have difficulty in cleaning the candle grease from metal candle-sticks try setting the candlesticks in a hot oven for a few minutes. This will melt the grease. Of course, care must be taken not to leave them in too long or the candlesticks will melt well as the grease.

If you wet a spoon before using it to serve jelly you will find the felly will not stick to it and the serving is more easily accomplished. To clean fly specks from varnished

wipe with a soft cloth dipped in equal parts of skim milk and water. To pick up little pieces of broken glass, wet a woolen cloth; lay it on the floor where the fragments are and pat it. The little particles will ad-here to the damp cloth.

The skin of new potatoes is more saily removed by rubbing with a stiff little brush than by scraping with a

If curtain rods or poles are rubbed with hard soap before being put up, the curtains will slip on them easily.

Graham Fig Gems. Scald one cupful of sweet milk, then add one-fourth cupful of granulated sugar, one-half teaspoonful of salt and one heaping tablespoonful of butter. Stir until the sugar is dissolved and the butter is melted, then set aside to In another dish mix one and one-half cupfuls of graham flour, one cupful of white flour and two and one-half rounded teaspoonfuls of baking powder together. When the milk is cold, add it to the dry ingredients with one well beaten egg. Beat hard for a couple of minutes then stir in one-half cupful of figs chopped fine and dredged with flour. Fill hot greased gem pans half full and bake in a hot oven until golden brown denly a rim of translucent silver and These are delicious with jam or mar-

> Homemade Wall Paper Cleaner The following mixture is more easily applied, and does the work more effect tively than any of the baked prepara tions that are sold at a good price for a small quantity.—one generally paying the sum for the label and tin, to box it up tor sale. Take one part sal ammoniac, four parts rye flour, and water enough to form a dough, then use on the soiled parts as if the mixture was a sponge. As the dirt is transferred from the wall to the cleaner, turn the soil in, and work out a clean part of the mixture. A little practice will soon show how easily this is accomplished. without waste to the mixture. continue rubbing the soiled surface of the cleaner into the wall.

> > Canning Hint,

A vegetable soup is one of the best canned helps to the housekeeper. Cut into small pieces some tomatoes, onions, parsley, carrots, sweet peppers, okra, etc. Stew together until thoroughy done. To each pint jar add half a teaspoonful of salt. Flavor with celery. These soup vegetables are so delicious that just the addition of bolling water makes a very palatable soup. Two large teaspoonfuls of beef extract to a quart of boiling water and a jar of the canned vegetables make a delicious scup.

Polosettia Salad. Scald and peel small round toma toes. With a sharp knife cut each one through from the top down to the bottom, making the tomato to look like a poinsettia blossom. Take yolk of hard boiled egg and add to firm mayonnaise. Fill center with this mixture and sprinkle top with more egg yolk. shaving of cucumber rind to represent leaf or stalk. A few powdered pistachio nuts can also be sprinkled on

Starch spoils ribbons, as it soon makes them look old. The best thing to use for stiffening ribbons or lace is to put several lumps of sugar in hot water and let them dissolve, then put the ribbons or lace in the water. This will make them just a nice stiffness, alleged B and will not spoil shem as starch Pompeil.

the center of the tomato



### BRUSSELS'/INTREPID BURGOMASTER



Even such awful gloom as which envelops Europe has its light spots, and one of the brightest of these is Adolphe Max, the irrepressible burgomaster of Brussels. He had no chance to fight for his city, because it was surrendered to the Germans without defense, but he met the conquerors with undaunted spirit, the they locked him up as surety for the war tax of 50,000,000 francs, which was levied on Brussels. M. Max paid 3,500,000 francs of this sum and gave notes for the remainder up to 20,000, 000 francs, but later he refused to re deem the notes, so he was carried a prisoner to the fortress of Namur.

It is related of Burgomaster Mas that when the German commander entered his office to discuss with him the terms on which Brussels should yield and the methods by which the citizens should be restrained from at tacking the invaders, the represe tive of the kalser bore hims

even more haughtiness than might properly be expected from a victorious enemy. His honor, the burgomaster, promptly stiffened up and prepared to meet the Teuton on his own ground. The officer strode up to a table in the center of the room and with a flourish drew his sword and slaumed it down, merely as a preliminary. M. Max immediately and with as big flourish drew from his waistcoat pocket a fountain pen and slammed it down beside the sword. The officer saw the point and the interview proceeded without further

#### PRIME MINISTER TAKES THE FIELD

Gen. Louis Botha, premier of the South African Union, has taken the field in supreme command of the operations against German Southwest Africa, and the revolt of Colonel Marits and his forces hastened the movements of the former leader of Boer armies. Before the Boer war General Botha was unknown outside the Transvaal, but his dashing work in that conflict soon made his name a household word. He taught the British generals some severe lessons in open field fighting and in artillery work, and earned their respect and even their liking.

Kitchener's dealings with Botha during that war were always frank and cordial. At one meeting—a hasty conference of two hours' duration when some glimmering of peace appeared on the horizon-"K. of K.'s" temper might have been tried to snapping-back point, but it stood the test.

"I must get off now," he said; "I have
an armored train to catch seven miles down the line." "Dog't hurry away on
that account," answered Botha, with a smile; "we caught it first thing this

Since then the English trains that General Botha has had to catch have been boat-trains to England. No coronation is complete without him. He is recognized as a great statesman; he has come to be regarded as one of the most remarkable men in the empire. He has been premier of the Union of South Africa since 1910.

# MAHARAJAH JAM IS LOYAL



Not long ago a poor student and the greatest and richest of the princes of India, the Maharajah Jam Saheb of Jamnagar, has demonstrated his loyalty to the imperial government by offering for service against Germany a force of 1,000 infantry, two squad-rons of lancers and 15 motors. In his conege days the Maharajah Jam was known as Ranji, and under that name became a world famous cricketer. Just after his graduation at Cam-bridge the late maharajah of Jamnagar disowned him as his heir and discontinued the large allowance the young man had been receiving. Withto earn his living, which he did after a fashion by writing on sports and giving lessons in Hindu and Sanscrit and in Indian history at Cambridge. Then the throne to which he had for

seases a number of magnificent palaces, his strongboxes are overflowing with money and jewels, and his income is so large that whenever he revisita England he leases some one of the country's finest country houses. The Maharajah Jam is as popular as ever in England, and does not fall in gratitude to the nation that educated him and put him on the throne that was rightfully

## MRS. LITTLETON WINS LONG FIGHT

Mrs. Martin W. Littleton, wife of Congressman Littleton of New York, has won her three years campaign for government ownership, of Monticello, the home of Thomas Jefferson, of Virginia, author of the Declaration of Independence, of the statute of Virginia for religious freedom, father of the University of Virginia, and founder of the Democratic party of

the United States. The other day Secretary of State William Jennings Bryan penned an appeal to Congressman Jefferson M. Levy of New York, owner of the property, asking him to consent to the change of ownership and Mr. Levy agreed to part with the property for \$500,000, though it cost him \$1,000,000. Mr. Levy inherited the old home of Jefferson from his uncle, who was a captain in the navy and who bought it from the owner, who purchased it at public auction after Jefferson's

death, when Jefferson's daughter, unable to meet her debts, was obliged to sell it away from the fa When Mrs. Littleton started her campaign she put out a broch tied "One Wish," and signed by "Peggy O'Brien," her pen name. At last her one wish is to be gratified. Before her marriage in 1896 she was Maud Wilson of Dallas, Texas.

Relics of Other Days. Splendid gates remain in many of the lesser cities of the old world, just as far north in Germany as there are remains of aqueducts built by the Ro-mans which are as fine as the Aquia Marcia at the papal capital, remains of the days that are long taded, but the monuments of which can be seen above ground or dug out of the underground like those of Troy, of the alleged Babylon, of the more certain

Sexton in Hard Luck.

One of the healthfest localities in Australia, it is estimated in Lithgow. New South Wales, and this has been confirmed by the action of the local sexton, who has complained to the cemetery trustees that, owing to the few deaths, he is unable to make a living. He applied for increased salery, stating that since he took the position he has only averaged 15 per week, and could not live on that. The trustees refused the request.

