

MAKING BIG TRAYS.

A Method of Making Ones That Are Absolutely Waterproof.

The development of bromide enlargements and the use of large sized plates render necessary dishes of a size which are very expensive to purchase and often very unmanageable on account of their excessive weight, especially if they are of glass or porcelain. In consequence of the expense home-made trays are often employed, but these are very likely to leak and then become very bothersome. Perhaps the most general expedient is the lining of a wooden tray with oilcloth or sheet rubber, but such a tray usually has wrinkles and folds on the bottom, and hence is not particularly economical of solutions, besides being very likely to leak. Sheet lead may be employed as a lining, but the trays then become very heavy. A process frequently advocated is the painting of the inside of a wooden tray with asphaltum to make it watertight. In order to make this effective, several thin coats must be given, with thorough drying between, and it will then be found that the asphaltum will not resist the prolonged action of photographic chemicals. The process which we found to be most effectual is to paint the tray with a coat of glue to which has been added 5 or 6 per cent of bichromate of potassium. By exposing to sunlight for two or three hours, the coating becomes absolutely waterproof. We usually give three or four coats of glue, with thorough sunning after each, and find that the resulting tray leaves little to be desired for lightness and durability.

A Miracle of Irrigation.

By Ray Stannard Baker.

Ever men worked miracles, they have worked them here in the Western valleys. If ever something was created from nothing, these men have done it. Thirty-five years ago the Salt River Valley, into which we had driven, was all a parched desert, uninhabited save by a few lean Indians and two or three hardy traders, whom the sand and the cactus crowded down close to the water of the river. It was a thousand miles from the nearest railroad—an unknown, desolate, forbidding land, a part of the Great American Desert, which travelers said would never support human life. To-day the Salt River Valley contains a population of over 25,000. It has three cities, one, Phoenix, the capital of Arizona, having electric lights, an electric car line, good hotels, churches, and other buildings, residences surrounded by trees, lawns, and a wilderness of flowers. More than 125,000 acres of land round about are laid out in farms, highly cultivated, with orchards of oranges, almonds, olives, and figs, and grain and hay fields. Thousands of cattle feed in the rich meadows, and there are bees, chickens, ducks and ostriches unnumbered. Richer soil than this once desert valley does not exist anywhere in the world except in other desert valleys. Here one may behold the startling spectacle of orange groves in bearing worth \$1000 an acre on one side of a fence, and bare cactus desert on the other, both having the same soil, the same opportunities, but only one having water. Here, when a man builds his fence of cottonwood posts, such is the soil and such the water that the posts take root and grow into trees, so that the wire of many old fences is seen running through the centre of large trees. Here a farmer rarely needs to use fertilizer, for the river comes in bearing rich silt and spreads it over his fields; and he may sometimes cut two or three more crops a year from his alfalfa fields, and then pasture them during the winter—winter which is in reality a continual spring.—The Century.

Problems of To-Day.

By Governor Odell, of New York.

PROBLEMS of the most important character are ever before us, which demand integrity of purpose and wisdom of action in their solution. The successes of arms have given way to the demands of our commerce; the upbuilding of our Nation exacts tribute from our citizenship. The duty of the State calls for the encouragement of labor and the restraint of greed.

The capital of the individual is inadequate to cope with these great problems, and a community of interests has been evolved before which all obstacles are removed, and there seems to be no limitation to our power or to the influence we may exert upon the destinies of the world. Wealth and its accumulation might prove dangerous to the simplicity of our Government were it not that over and above all there is a religion that teaches the brotherhood of man. For, after all, the greatest product of our country is man—man self-reliant, courageous and determined, whose faith is in himself and in his God.

The foundation of wealth is labor, no matter what form it may take, its existence without labor would be both impossible and useless. All property, therefore, being labor, it should be conceded equal rights with, but never in excess of that which is given to its creator.

These are some of the problems that the changed conditions incident to our present commercial development have projected into the affairs of State. Respect for law cannot all be on one side. Greed should never prevail or be permitted to conquer the honest intentions of our employes. Powers that are prejudicial to the health, the morals or the well-being of any of our citizens are sure to lower the standard of our citizenship. If we should have other aims than this we would have fought in vain for republican principles of Government and the sacrifices of our forefathers would have been fruitless. We must depend upon a broad statesmanship upon the part of our lawmakers and upon the patriotism of a free people for the solution of the problems that confront us.

Simplicity and Regularity Cardinal Laws of Health

By Mme. Adelina Patti.

To be healthy is the natural state, and disease is, in nine cases out of ten, our punishment for some indiscretion or excess. Every time we are ill it is part of our remaining youth which we squander. Every recovery, whether from headache or pneumonia, is accomplished by a strenuous effort of vitality, and is therefore a waste of our capital of life. Therefore do not let yourself be ill. The best plan to avoid illness is to live regularly, simply, with frugality that stupid persons alone will deem painful or eccentric.

Sleep eight hours in every twenty-four. Ventilate the rooms you work and sleep in. Very few people, even among those who think they are well up in modern ideas, have any conception of what ventilation means. Even when my voice was the only thing I had in the world, I slept with my windows wide open, summer and winter, and never caught cold in that way.

Examine seriously into your list of social obligations. Have the good sense to recognize that there is neither pleasure nor profit in most of what you regard as essential in that line, and simplify your social life—simplify it all you can.

Complicated living breeds worry, and worry is the main enemy of health and happiness—the one fiendish microbe that does more to destroy the health and happiness of mankind than any other.

Make your home a pleasant place, cheerful, but well within your means. Drink nothing but water or milk—especially drink lots of water. You never can drink too much of it.

On the other hand, remember that alcohol is poison which does untold damage within you; that wine, beer, coffee and tea are poisons, too. Shun them as you would diluted vitriol.

Cultivate Trust in Your Fellow Men

By Margaret Stowe.

WO children were discussing the strong and weak points of their respective schools. One said that at her school it was against the rules to do thus and so. The other child replied that at the school she attended there were no rules, the scholars were put on their honor.

So few parents and teachers realize the necessity of setting an example to children by trusting them.

I have never known a school where rules regulated the privileges and restrictions where those same rules were not constantly being broken. On the other hand, it is the exception to find a school in which the children are put on their honor where confidence and harmony do not reign.

It is so throughout our lives. A man who has any self-respect resents suspicion. Instinctively we desire to be trusted to do what is right, and no one is quite himself, quite true to his best impulses, when under suspicion.

There is a large amount of distrust in circulation among the majority of men and women. There are so many who are constantly suspecting the motives of others, with apparently no reason whatsoever.

It is far more disgraceful to distrust your friends than to be deceived by them. Our mistrust only justifies the mistrust of others.

We cannot be too careful in regard to our thoughts of others. Our attitude and bearing toward those around us is soon observed by the younger minds, whose training lies in our hands, and is copied. We stand its examples to them for good or evil.

We should strive to show children by our example that life is more beautiful and more worth living when we act honestly, justly, mercifully and lovingly toward all.

We should teach them that right feeling develops right thinking; the right thinking brings out the right word and deed.

The confidence we have in the virtue of others is no slight evidence of our own.

Try to cultivate trust in your fellow men and the bare show of faith will some time create worth.—New York American.



According to a note in the Electrical Review, a gas engine, when coupled to a dynamo, produces three times as much light in incandescent lamps, and about eleven times as much in arc lamps, as the same amount of gas would produce if burned directly at gas jets.

The largest coil of wire rope ever made in Brooklyn was turned out by a rope company of that city recently. It measured 17,700 feet in length, or over three miles, without a break, and weighed 22,030 pounds. It is for use in a bituminous coal mine, was made of forty-two strands of crucible cast steel, took sixteen days to manufacture and was valued at \$2300.

Dr. Gruen, of London, has been using the fluid lens with much success for taking photographs at night without any light except the ordinary illumination used in buildings. For example, he made excellent snapshot pictures of stage scenes in theatres with no extra light, and even cinematograph views in the same way. The fluid lens was formerly used to overcome the difficulty of chromatic aberration before the combination of flint and crown glass was invented, but Dr. Gruen used it for its rapidity of action. He thinks that it will greatly widen the field of photography.

Government investigations of stream pollution and of the qualities of natural waters in general have been instituted by the Division of Hydrography of the United States Geological Survey. The work will embrace the sanitary inspection of streams, turbidity and color measurements, and chemical and bacteriological analyses. The co-operation of workers in various fields is desired, particularly in the physical and analytical sections. To secure uniformity in results, the department has issued two bulletins setting forth standard methods of making and reporting analyses, and describing handy apparatus for the color and turbidity determinations.

Many persons have a notion that the pineapple grows on a tree. It does not. The plant reaches a height of only four feet, to the tip of the leaves. It comes out of the ground as a stalk, but divides at once into sword-like leaves, fifteen in number, from the centre of which projects a stiff, upright stem, and at the top of this stem grows the fruit. The stem is short, and the crown of the fruit, when full grown, is a foot or more below the tips of the leaves. Each plant produces a single "apple," but when this is pulled a little sucker appears on the stem among the leaves, and this becomes the head of the plant, and within a year produces another apple. This may go on for years.

The Catholic University of America has just equipped an elaborate department for the thorough experimental study of the problem of flight. Part of the equipment is a wooden tunnel fifty feet in length, with a cross section of six square feet, in which a wind of any desired speed can be generated by means of a suction fan at one end of the tunnel. Objects of various kinds and shapes are placed in this wind current, and their resistance, lift, drift, surface friction, etc., are noted. A gauge that can be read to less than one ten-millionth of an atmosphere is used to determine the pressure at all points in the stream of air. It is hoped that these experiments may furnish trustworthy data for aeronautic calculations.

A Plague of Tarantula Spiders. There is a perfect plague of tarantula spiders in the south of Spain, near Seville, says the London Express. The number of the sufferers is so great that all the guitar players of the neighborhood have been employed. They have established a tariff at the rate of about two cents a mass treated by the harmonic cure. The guitar player has to keep up the tune "La Tarantula," while the person bitten by the spider dances to it. In serious cases, when the patient is confined to bed, the guitar player accompanies the family, who sit around the bed singing the disenchanted "Tarantula" rhyme, which might be translated as follows: "Come out, come out, this instant, Come out, thou venom bite, And may the cruel biter Forever take to flight."

One America Enough. Lord Kitchener's statement that the empire's new territory is a land full of "every description of potential wealth" should give pause to those who declare that gold is its sole resource. But what did Lord Kitchener mean by the statement that he have "the makings of nothing less than a new America in the southern hemisphere?" One America is as much as the civilized world can put up with; and there are times when we find that one too many.—London Saturday Review.

Granite the Lowest Rock. Granite is the lowest rock in the earth's crust—it is the bed rock of the world, and shows no evidence of animal or vegetable life; it is the parent rock from which all the rocks have been either directly or indirectly derived.

A Fool's Sayings. The sayings of a fool with a bank account are brighter than the most scintillant wit of a poor genius.—New York News.

SUFFERED SEVEN YEARS

With Catarrhal Derangements of the Pelvic Organs.



Miss Kate Brown.

Hundreds of Dollars Spent in Vain—Peruna Cured.



A neglected cold is frequently the cause of death.

It is more often, however, the cause of some chronic disease.

There is not an organ in the body but what is liable to become seriously deranged by a neglected cold. Diseases of the kidneys, bladder and digestive organs are all frequently the result of a neglected cold.

Hundreds of dollars are spent on doctors and medicines trying to cure these diseases, but until the true cause of them is discovered there will be no use in using medicine.

Dyspepsia medicine, diarrhoea medicine and constipation medicine is of no good whatever when catarrh is the cause. The catarrh must be treated. The cause being removed, the derangements will disappear.

Peruna cures catarrh of the digestive organs, the urinary organs or any of the internal organs.

If you do not derive prompt and satisfactory results from the use of Peruna, write at once to Dr. Hartman, giving a full statement of your case, and he will be pleased to give you his valuable advice gratis.

Address Dr. Hartman, President of The Hartman Sanitarium, Columbus, O., and blessings to you for Peruna.—Miss Kate Brown.

Miss Kate Brown, Recording Secretary of the L. C. B. Association, of Kansas, in a letter from 605 N. Seventh St., Kansas City, Kan., says:

"For seven years I have not known what it was to spend a well day. I caught a severe cold, which I neglected. It was at the time of menstruation, and inflammation set in and prostrated me. Catarrh of the kidneys and bladder followed, my digestive organs gave way; in fact, the cold disarranged my whole system.

"I spent hundreds of dollars with doctors and medicine, but derived but little benefit until I began treatment with Peruna. I kept taking it for nearly nine months before I was completely cured, but I kept growing better gradually so that I felt encouraged to continue taking Peruna until my health was restored. I send my thanks

The site of the lost Indian city, Mascoutens, which was reported as having 20,000 inhabitants in 1675, has been determined by the labors of Thomas Clithero, of Portage, Wis., now extended over many years. It was the largest city in all Indian history, so far as United States territory is concerned, and the descriptions of the Jesuits in the course of the seventeenth century, closing with Marquette and Joliet in 1673, are said to have been verified.

How to Keep Young. One of the secrets of keeping young, vigorous and supple-jointed, is to continue to practice the activities of youth, and to refuse to allow the mind to stiffen the muscles by its suggestion of age limitations. If men like Peter Cooper and William E. Gladstone, who kept up the vitalizing exercises of robust manhood when far into the eighties, had succumbed at 40 to the thought of approaching age, how much of their valuable life-work would have remained undone?

ST. JACOBS OIL POSITIVELY CURES Rheumatism Neuralgia Backache Headache Featache All Bodily Aches AND CONQUERS PAIN.

RIPANS Tourists, sportsmen, hunters and fishermen find Ripans Tabules an always handy article in hotel, sleeping car, field and camp. They are the best and only medicine needed for an outing, as they keep head, stomach, bowels and liver in the right condition, and thus prevent any other trouble likely to arise from exposure or sitting at late campfires.

At druggists. The Five-Cent packet is enough for an ordinary occasion. The family bottle, 60 cents, contains a supply for a year.

QUALIFIURB GHOICICATI KIRINWYIETI \$400 IN CASH FREE! We will give the above reward to any person who will correctly arrange the above letters to spell the names of three American cities. Use each letter but once. Try it. We will positively give the money away, and you may be the fortunate person. Should there be more than one set of correct answers, the money will be divided equally. For instance, should five persons send in correct answers, each will receive \$80; should ten persons send in correct answers, each will receive \$40; twenty persons, \$20 each. We do this to introduce our firm and goods we handle as quickly as possible. Send no money with your answer. This is a free contest. A post card will do. Those who have not received anything from other contests try this one. NATIONAL SUPPLY CO., NIAGARA FALLS, ONTARIO.

THE BEST POMMEL SLICKER IN THE WORLD BEARS THIS TRADE MARK TOWER'S FISH BRAND THOUGH OFTEN IMITATED AS A SADDLE COAT IT HAS NO EQUAL. ON SALE EVERYWHERE. CATALOGUES FREE. SHOWING FULL LINE OF GARMENTS AND HATS. A. J. TOWER CO., BOSTON, MASS., U.S.A.

W. L. DOUGLAS \$3 & \$3.50 SHOES UNION MADE W. L. Douglas shoes are the standard of the world. W. L. Douglas made and sold more men's Good Year Well Hand Sewed Process shoes in the first six months of 1902 than any other manufacturer. \$10,000 REWARD will be paid to any person who will disclose this statement. W. L. DOUGLAS \$4 SHOES CANNOT BE EXCELLED. 1000 pairs, \$1,100, \$200 1st 6 months, \$2,340,000 Best Imported and American leathers, Heigl's Patent Cut, Enamel Box Calf, Vici, Concord Colt, Nat. Kangaroo, Fast Color Eyelets used. Caution! The genuine have W. L. DOUGLAS name and price stamped on bottom. Shoes by mail, 25c. extra. Illus. Catalog free. W. L. DOUGLAS, BROCKTON, MASS.

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BOOKKEEPING! Taught by mail, either sex, in shortest time at lowest cost. Individual instruction under personal supervision. Latest practical methods. No. 100. \$1.00. E. H. Public Accountant, 120 Arch St., Philadelphia, Pa.

Old Letters. I wish to buy Autograph letters of famous people. Send list of what you have. W. R. BENJAMIN, 112 Broadway, New York.

Charging Women Less Than Men. At the old-fashioned inns and restaurants in Sweden it is customary to charge less for women than for men on the theory that they do not eat so much. At some hotels in Sweden a man and a wife are charged as one and one-half persons if they occupy the same room. A husband and wife may travel as one and one-half persons by railway, and also by the post routes, furnishing their own carriage.

Hall's Catarrh Cure is a liquid and is taken internally, and acts directly on the blood and mucous surfaces of the system. Write for testimonials from Manufacturers by F. J. CHERRY & Co., Toledo, O.

The largest coral reef in the world is the Australian barrier reef, which is 1100 miles in length.

FIT'S permanently cured. No fits or nervousness after first day's use of Dr. Kline's Great Nerve Restorer. \$2 trial bottle and treatise free. DR. H. KLINE, Ltd., 391 Arch St., Phila., Pa.

France's 16,000 doctors average less than \$750 a year professional income.

Mrs. Winslow's Soothing Syrup for children teething, softens the gums, reduces inflammation, allays pain, cures wind colic, 25c. a bottle.

It's the tiresome people who bore their way through life.

Jamsure Pils' Cure for Consumption saved my life three years ago.—Miss Thomas E. Robinson, Maple St., Norwich, N. Y., Feb. 17, 1900.

There is a difference between being outspoken and being out-talked.

POTNAM FADELESS DYES color more goods, per package, than others.

Some people love their neighbors for what they can get out of them.

My Lungs "An attack of la grippe left me with a bad cough. My friends said I had consumption. I then tried Ayer's Cherry Pectoral and it cured me promptly." A. K. Randles, Nokomis, Ill. You forgot to buy a bottle of Ayer's Cherry Pectoral when your cold first came on, so you let it run along. Even now, with all your hard coughing, it will not disappoint you. There's a record of sixty years to fall back on. Three sizes: 25c., 50c., \$1. All druggists. Consult your doctor. If he says take it, then do as he says.—Miss Thomas E. Robinson, Maple St., Norwich, N. Y., Feb. 17, 1900. Leave it with him. J. C. AYER CO., Lowell, Mass.

Headache? Appetite poor? Bowels constipated? It's your liver! Ayer's Pills are liver pills.

Want your moustache or beard a beautiful brown or rich black? Use Buckingham's Dye. Sole agents, R. P. Hall & Co., Nashua, N.H.

Cascarets CANDY CATHARTIC BEST FOR THE BOWELS. Genuine stamped C.C.C. Never sold in bulk. Beware of the dealer who tries to sell "something just as good."

HAMLIN'S WIZARD OIL FOR CUTS, WOUNDS. ALL DRUGGISTS SELL.

DROPSY NEW DISCOVERY; gives quick relief and cures worst cases. Sole of testimonials and 10 days' treatment free. Dr. R. H. GREEN'S BLOOD, Box 2, Atlanta, Ga.

PISO'S CURE FOR CONSUMPTION. CURES WHERE ALL ELSE FAILS. Best Cough Syrup. Tastes Good. Use in time. Sold by druggists.