Useful Information.

Wax Flower Making.

The best white wax is required for the art—pure, and free from granulation. The consistency may need to be modified, according to the state of the weather, and the part of the flower to be imitated; it may be made firmer and more translucent by the addition of a little spermaceti, while Venice turpentine will give it ductility. In preparing the wax for use, it is melted with Canada balsam, or some kind of fine turpentine, and poured into flat tin moulds; these give it the form of quadrangular blocks or slabs about an inch thick. These blocks are cut into thin sheets or films, in one or other of several different ways—by fixing them down flat, with a screw and a stop, and slicing off layers with a kind of a spoke-shave; or holding a block in the hand, and passing it along a carpenter's plane, having the face uppermost; or causing the block to rise gradually over the edge of the mould, and cutting off successive slices with a smooth-edged knife.

The coloring of the wax is an important matter, seeing that in some instances the tint must penetrate the hole substance; whereas in others it is better when laid on the surface as a kind of paint. The choice of colors is nearly the same as for other kinds of artificial flowers, but not in all instances. The white colors are produced by white lead, silver white and one or two other kinds; for red, vermillion, minium, lake and carmine; for rose color, carmine, following an application of dead white (to avert yellowish tints); for blue, ultramarine, cobalt, indigo, and Prussian blue; for yellow, chrome yellow, massicot, Naples yellow, orpiment, yellow ochre, and gamboge; for green, vedigris, Schweinfurth green, arsenic green, (the less of this the better), and various mixtures of blue and yellow. For violet, salmon, flesh, copper, lilac, and numerous intermediate tints, various mixtures of some or other of the colors already named. Most of these coloring substances are employed in the form of powder, worked up on a muller and stone with essential oil of citron or lavender, and mixed with the wax in a melted state; the mixture is strained through muslin, and then cast into the flat moulds already mentioned. Or else a muslin bag filled with colors is steeped for a time in the melted wax. The material dealers sell these slabs of wax ready dyed, to save the flower-maker from a kind of work which is chemical rather than manipulative. Some flowers require that the wax shall be used in a purely white bleached state, colors being afterwards applied to the surface at selected spots.

The wax is, of course, the chief material employed in wax-flower making; but it is by no means the only one. Wire bound round with green silk, tinting brushes and pencils, shapes or stencil patterns, moulds and stampers, flock or ground-up woolen rag, and many other implements and materials, are needed.

The building-up of a wax-flower is a work of patient detail. The patterns of leaves and petals are made of paper or of thin sheet-tin, copied from the natural object; and the wax sheets are cut out in conformity with them. Only the smaller and lighter leaves are, however, made in this way; those of firmer texture and fixity of shape are made in plaster moulds. The patterns are laid on a flat, smooth service of damp sand; a ring is built up round them, and liquid plaster is poured into the cell thus formed. Generally two such moulds are necessary, one for the upper and one for the lower surface of the leaf. Sometimes wooden moulds are employed, into which (when moistened to prevent adhesion) the wax is poured in a melted but not very hot state. The stems are made by working wax dexterously around wires, with or without an intervening layer of silken thread. By the use of flock, down, varnishes, &c., the leaves are made to present a glossy surface on one side and a velvety surface on the other. A singular mode of preparing films of unusual thinness is by the aid of a small wooden cylinder, like a common cotton reel, or rather, ribbon-reel; this is dipped and rotated in melted wax until it takes up a thin layer, which layer, when cold, is cut and uncoiled; the difference of smoothness which the two surfaces present fits them to represent the upper and lower surfaces of a leaf or petal. The combination of all these materials into a built-up flower is a kind of work not differing much from that exercised in regard to textile flowers.—*British Trade Journal.*

Copying Medals.

Copies of medals or other similar articles may be readily made by a very simple piece of apparatus. A cast of the medal is first taken in wax. This is done by moistening the medal or coin slightly, and then pouring the melted wax over it. The object of the moistening is to prevent the wax sticking to the surface of the metal. While the wax is still warm, a piece of copper wire should be imbedded in it to serve as a support, and to connect with the zinc in the decomposing cell. After removing the medal from the mold, the surface of the mold is dusted over with fine plumbago until it appears quite black; all excess of the carbon is then carefully removed with a soft brush. If fine iron filings can be had, a few of them are sifted over the face of the mold, and a solution of sulphate of copper is poured on it. It is then carefully washed; this serves to give a very thin coating of copper, and facilitates further operations, but may be omitted if not convenient. Care must be taken, in putting on the plumbago coating, that it comes in contact with the copper wire. A very convenient way of applying this wire is to bend it into a ring slightly larger than the medal to be copied, lay it on the table around the medal, and pour the wax over both at the same time. Scraping with a knife exposes it completely. The mold being prepared, take an ordinary glazed earthenware basin four or five inches deep, and in it set a small flower pot, having previously plugged up the hole in the bottom of the pot with a piece of wood, a little wax, or other suitable material. The flower pot is to be filled with a weak solution of common salt. The outer basin is then filled with a strong solution of sulphate of copper, and a little bag holding crystals of sulphate of copper is hung in it to keep it saturated. Add a few drops of sulphuric acid to both solutions, place a piece of zinc in the flower pot, and connect it with the wire of the mold. The mold being now put in the outer solution, a coating of copper soon shows itself. The mold may be left in the solution two or three days, if a thick coating is desired. —*Boston Journal of Chemistry.*

Professor Agassiz.—The doctors are puzzled to account for the symptoms of the disease by which Agassiz lost his life, and a careful autopsy has been made. The brain and all the vital organs, especially the heart, were examined with great care. The stomach and liver were free from disease; but in the heart were found evidences of the trouble with which the Professor suffered a few years ago. Special attention was paid to the brain, which was found to be very large and heavy, though its exact weight has not yet been determined. Careful examination was made of the base of the brain, and to insure success in this, it will be necessary to allow it time to harden.

Polishing Wood With Charcoal.

We extract from the *Cabinet-Maker* the following description of the method of polishing wood with charcoal, now much employed by French cabinet-makers:

All the world knows of those articles of furniture of a beautiful dead black color, with sharp, clear cut edges, and a smooth surface, the wood of which seems to have the density of ebony; viewing them side by side with furniture rendered black by paint and varnish, the difference is so sensible that the considerable margin of price separating the two kinds explains itself without need of any commentary. The operations are much longer and much more minute in this mode of charcoal polishing, which respects every detail of the carving, while paint and varnish would clog up the holes and widen the ridges. In the first process they employ only carefully selected woods of a close and compact grain; they cover them with a coat of camphor dissolved in water, and almost immediately afterward with another coat composed chiefly of sulphate of iron and nut-gall. The two compositions in blending penetrate the wood and give it an indelible tinge, and at the same time render it imperivious to the attacks of insects.

When these two coats are sufficiently dry, they rub the surface of the wood at first with a very hard brush of couch-grass (*chiendent*), and then with charcoal of substances as light and friable as possible, because if a single hard grain remained in the charcoal this alone would scratch the surface, which they wish, on the contrary, to render perfectly smooth. The flat parts are rubbed with natural stick charcoal, the indented portions and crevices with charcoal powder. At once, almost simultaneously, and alternately with the charcoal, the workman also rubs his piece of furniture with flannel soaked in linseed oil and the essence of turpentine. These pouncings, repeated several times, cause the charcoal powder and the oil to penetrate into the wood, giving the article of furniture a beautiful color and perfect polish, which has none of the flaws of ordinary varnish. Black-wood, polished with charcoal, is coming day by day to be in greater demand; it is most serviceable; it does not tarnish like gilding, nor grow yellow like white wood, and in furnishing a drawing-room it agrees very happily with gilt bronzes and rich stuffs. In the dining room, too, it is thoroughly in its place to show off the plate to the greatest advantage, and in the library it supplies a capital framework for handsomely bound books.

Domestic Economy.

Roast Turkey.

After drawing the turkey, rinse out with several waters, and in next to the last mix a teaspoonful of soda. The inside of a fowl, especially if purchased in the market, is sometimes very sour, and imparts an unpleasant taste to the stuffing, if not to the inner part of the legs and side bones. The soda will act as a corrective and is moreover very cleansing. Fill the body with this water, shake well, empty it out, and rinse with fair water. Then prepare a dressing of bread crumbs, mixed with butter, pepper, salt, thyme or sweet marjoram, and wet with hot water or milk. You may, if you like, add the beaten yolks of two eggs. A little chopped sausage is esteemed an improvement when well incorporated with the other ingredients. Or, mince a dozen oysters and stir into the dressing; and, if you are partial to the taste, wet the bread crumbs with oyster liquor. The effect upon the turkey-meat, particularly that of the breast, is very pleasant.

Stuff the craw with this, and tie a string tightly about the neck, to prevent the escape of the stuffing. Then fill the body of the turkey, and sew it up with strong thread. This and the neck-string are to be removed when the fowl is dished. In roasting, if your fire is brisk, allow about ten minutes to a pound; but it will depend very much upon the turkey's age whether this rule holds good. Dredge it with flour before roasting, and baste often; at first with butter and water, afterwards with the gravy in the dripping-pan. If you roast in an oven, and lay the turkey in the pan, put in with it a teacup of hot water. Many roast always upon a grating placed on the top of the pan. In that case the boiling water steams the under part of the fowl, and prevents the skin from drying to fast, or cracking. Roast to a fine brown, and if it threaten to darken too rapidly, lay a sheet of white paper over it until the lower part is also done.

Stew the chopped giblets in just enough water to cover them, and when the turkey is lifted from the pan, add these, with the water in which they were boiled, to the drippings; thicken with a spoonful of browned flour, wet with cold water to prevent lumping, boil up once, and pour into the gravy-boat. If the turkey is very fat, skim the drippings well before putting in the giblets.

Serve with cranberry sauce. Some lay fried oysters in the dish around the turkey.—*Ex.*

Boiling Potatoes.

The lady authoress of "Uncle Tom," and divers other popular publications, has been writing a homily on cooking potatoes. I should like to know if Mrs. Stowe does really boil potatoes herself? I do, and I have long since known better than to pare my potatoes raw and then douse them naked into water red hot—boiling at two hundred and ninety horse-power. That is one way to boil potatoes certainly, but not the proper one, by a very long way. Philosophy, common sense, and a month or two of practical experience over the dinner pot, teach us great deal better than that.

My dear madam, don't you know fifteen sixteenths of all the starch that a potato affords is deposited so near the surface, that however carefully we may pare the tubers in a raw state, we are sure to throw away the greater portion of that very material that we eat potatoes for? Then, if we toss our potatoes into boiling water, unprotected by their over-coats, we have set in a second, and hopelessly incorporated with the mass, that semi-volatile principle which gives the ill-cooked potato its slightly acrid, something insipid, and always objectionable flavor.

Any thoroughly potato-bred Irish woman would as soon think of committing regicide, as boiling her potatoes undressed, in the manner recommended by our literary lady cook. And there are no better potatoes, or potato cooks, any where in this world than there are in Ireland.

I tell you, fellow-housekeepers everywhere, that the correct way to cook a potato in any country, provided boiling is the determination, is to wash it clean, first—let it lie in clean cold water two hours—ten is all the better—place it in cold water in the pot, without paring, boil moderately until the test fork goes smoothly through the potato without encountering a mite of core. Then drain off the water, set the pot over the fire uncovered, for five minutes, after which whip off Mr. Potato's jacket in a hurry, and send him to the table in a close cover, piping hot—or if you are not over-fashionable and fastidious, it is preferable to serve "murphy" in his coat.

Please follow this formula a few times, and if you shall find it a pernicious practice, you shall be at liberty to consider Madeline as competent to write a readable romance, as she is to cook a potato.—*Saturday Evening Post.*

The Swine Yard.

Fattening Pigs.

The Michigan *Farmer* says:—One of the best pig breeders we know is W. Smith, the well-known master of the Marine Meat Market in Detroit. He has a taste for keeping the best hogs that are to be had. Few can excel him in the fineness of pure-bred Suffolks, Essex, Berkshires and Polands which he breeds. He has the faculty of making the most out of the pig that can be made. One of his points of fattening a pig is the use of the pen stock to wash it clean, and the curry-comb to keep its skin in a perfectly healthy condition; he is also particular to have it fed regularly every day, always at the same time to a minute. He changes the food from time to time, and when once the pig has started to get fat it is never allowed to go back.

One of the best kinds of food to start pigs with consists of peas or beans mixed with the offal of the dairy or the buttery, with a little fine corn-meal thrown in. Barley-meal is excellent, or crushed oats, but no food is equal to peas for a food to start on. Both peas and corn should be steeped in water, the hotter the better, and allowed to stand and soak up all they will. We notice this is the treatment that makes Smith so successful.

Some of his pigs when started will gain three pounds a day; and we have seen in his stalls Essex and Suffolk crosses that would dress 330 pounds at ten or eleven months old. But one of the fattening processes was a bath, with a flexible hose, at least twice a week. The hogs get so used to this that they like it, and seem to know when they are to enjoy this luxury, for they will come out and lie down as quick as the water begins to, play upon them.

It is the quick fattening that pays, and hogs thus treated make as profitable a return, even with pork at 5 to 6 cents, as any part of the farm produce.

Then again a hog should have a dry place to lie; in fact a good, well sheltered pen, with a dry plank under him, where he can sleep without disturbance, somewhat dark and shady, with no drafts of wind penetrating through it, rather low in the roof, so that the animal heat he gen-generates will surround him with a temperature that is pleasant; and when accustomed to be fed regularly there is no animal more punctual in its appearance at the trough. Then he should be fed all he will eat—not an ounce more. No food should remain in the trough after he gets through, and then it should be thoroughly cleaned out.

When put up to feed in this wise the hog does not need any excercise, nor does he require space for it. His whole comfort is in returning to his lair, and have a good opportunity, undisturbed by outside affairs, to increase in weight, and to make an ample return to his owner for the food he has enjoyed.

Sugar Beet for Swine.—Jonathan Talcott gives a statement in the *Boston Cultivator* of an experiment performed on a Suffolk pig where sugar beets were largely employed for fattening. The animal was about a year old, and the feeding on boiled sugar beets, tops and root, began on the 16th of August, and was continued three times a day until the 1st of October, after which ground feed was given, consisting of two parts of corn and one of oats, three times a day, until the animal was slaughtered, the meal being mixed with cold water. The result was, on August, 16th, when the sugar beet feeding was begun, that the weight was 360 lbs.; September 1st, 390 lbs.; October 1st, 450 lbs.; November 1st, 520 lbs. This is the substance of the statement given, by which we perceive that the increase the last of August, when fed on boiled sugar beets, was at the rate of two pounds per day; the same rate of increase on the same food continued through September. When fed on ground corn and oats, made into cold slop, the gain for the next fifty days was less than a pound and a half per day.

The *Stock Journal*, after giving a number of experiments in feeding corn to pigs, remarks that these experiments show that there is within a fraction of twenty-four pounds of pork in a bushel of corn; and the effort of every farmer should be to endeavor to get out as much as he can of it. And to do this he must have the right kind of hogs; they must be placed in the right condition, and fed in the right manner, with a view to profit.

Apparatus for Drying Grain.—M. Coignet has recently devised an apparatus for the purpose of drying grain and other substances at a cheap rate, and without destroying the germinating power of the seeds at the same time. For this purpose the articles to be dried are placed upon perforated stages, and traversed by a current of air from above, downward, heated to the proper temperature, from 104° to 122° Fahrenheit, which he finds best to suit his purpose. A still higher temperature, namely, from 300° to 310°, applied in the same apparatus, enables him to dry certain animal matters, intended as manures, without causing the loss of their nitrogenous material; but as such a temperature of dry air would be apt to cause combustion, he replaces this by superheated steam. In this way he has succeeded in preparing twenty cubic metres per day, and he is of the opinion that in this way we can best make use of animals which, in certain countries as Buenos Ayres, Australia, &c., are killed for their hides and tallow, and the decomposition of which in great quantities is so liable to produce pestilence.

Increase in Population.—It is estimated that during the past year, the population of California has been increased upwards of 25,000 by means of immigration alone. Placing the additions by birth at 15,000, which is a safe estimate, as the proportion of births over deaths is very large, California being considered the healthiest State in the Union, and we have a total increase of 40,000 for the year. If this rate of increase continues, by the time another year shall have rolled around, we will have a population of over one million.

Wheat, Etc.

The Future Wheat Supply.

The use of wheat bread is constantly increasing over the whole world. Rye and Indian, oatmeal, and rice are gradually losing ground, and for the reason, as has been stated, that there are great improvements in the manufacture of flour. This reason is probably not the true one. Wealth is increasing, and people dress better and live in more comfortable houses than formerly. Wheat bread is the food of a civilized man, while corn, oats and other coarse grain are deficient in qualities which make fine muscles, and which enter into the composition of a well organized brain. When Indians beg, they ask first for biscuit, "biagit;" and when an Arab is given corn bread, he looks on it with contempt. The Chinese prefer wheat flour to rice, and the South American ranchman gladly exchanges wool for Baltimore flour. The people of the Southern States always pretended to like corn bread best, but on Sunday morning biscuits were on the table, and the negro, being now free, thinks so much of flour that he will pay out his last dime for it, even if he has to go without whisky. In the slavery days flour was a most acceptable gift from a young colored man to his girl when he went to see her; it was more choice than candy, or "honey in the honeycomb." The demand for flour by the Asiatics and the Pacific Islanders is constantly increasing, notwithstanding they have trees which bear bread, milk and tallow, and so also is butter coming into request. It is tolerably certain that neither ancient nor modern Asiatics ever made butter as an article of food, and it would seem that wheat bread and butter must go together. With this great demand for wheat, it is somewhat alarming to consider that the whole United States east of the Mississippi does not raise enough for the people, and that it is becoming an important question how they are to be supplied in the near future, saying nothing about Europeans and Asiatics. At present, Minnesota, Wisconsin, Kansas, Iowa and Nebraska mainly furnish the surplus required, but if we are to judge by the past, the soil of these sections will in a few years become so impoverished that wheat growing will cease to be profitable. The only regions remaining are California and the interior embraced by the several Territories, and unless some new methods of cultivation shall be introduced, the surplus, if we have any, must come from countries where rain seldom falls, and which most Eastern farmers think wholly unfit for habitation. The truth really is, these arid countries have an almost incalculable capacity for wheat growing; and it is likely that Montana surpasses all others, though at present it is so remote and inaccessible that no more than what is needed at home is grown. The great Missouri and many large tributaries flow through Montana, giving vast volumes of water that can be used for irrigation, and with good farming the yield per acre is marvelous. Colorado can grow an immense surplus, so can New Mexico, Arizona, Utah, Idaho and Nevada, while we all know that California bears the palm through all the world; nor is Oregon much behind. The future surplus of wheat then must, at a no distant day, come from the mountain regions in the heart of the continent; and it is worth while to add that the average quality is so high that Eastern farmers have no conception how high it is.

If, then, the increased use of wheat bread is indicative of an advancing civilization, it is natural to conclude that the superior quality of the surplus for the future will be still more favorable for the human race, and especially to the people living where this fine wheat is grown; and in addition, another important fact is to be mentioned—which is, the purity of the atmosphere of all this trans-Missouri region, where fevers, agues, and all malarious diseases are unknown. Everywhere snow-capped mountains are in sight, the streams are always cold and clear, and the sun shines with undiminished splendor 300 days in the year.—*N. Y. Tribune.*

The editor of *Moore's Rural* speaks of meadows which have not been plowed in 20 years, and yet they yield not only heavy but first quality hay; they having always been pastured in early Fall, never fed close, and occasionally horrowed and top-dressed with fine, well-rotted manure.

Watch Springs.—Hair-springs, says a writer in the *Victoria Magazine*, are made in the factory, of finest English steel, which comes upon spools like thread. To the naked eye it is as round as a hair, but under the microscope it becomes a flat, steel ribbon. This ribbon is inserted between the jaws of a fine gauge, and the dial-hand shows its diameter to be two twenty-five hundredths of an inch. A hair plucked from a man's head measures three twenty-five hundredths—one from the head of a little girl at a neighboring bench — two twenty-five hundredths. Actually, however, the finest hair is twice as thick as the steel ribbon, for the hair compresses one-half between the metallic jaws of the gauge. A hair-spring weighs one-fifteenth-thousandth of a pound troy. In straight line it is a foot long.

Bean Porridge.— Boil a fresh beef bone (I think salt beef would answer if sufficiently freshened, though I never tried it,) in a large quantity of water, and use the meat for anything you choose. Let the liquor become cool, and remove all the grease. Boil a teacupful of beans in three quarts of this liquor until thoroughly soft and in pieces; add a little rice, the necessary amount of salt, and just before taking from the stove, a little thickening of some kind of meal. We use it about the thickness of gruel or graviss and add a little milk when we eat.

The Spectrograph.—The name is given to a simple little device for copying drawings, exhibited in the French department of the Vienna Exposition. It consists of a board, near the middle of which is a piece of window-glass fastened at right angles to it by means of two grooved wooden uprights. When placed near a window, with a drawing or copy on the end of the board nearer the window, its reflection in the glass causes it to appear upon a sheet of white on the opposide side of the glass. In this way quite an accurate tracing can be made by one who is no draftsman.

Miscellaneous.

Type-Setting Machines.

The question is very often asked by publishers, with a strong emphasis on the first word, "Is there a type-setting machine which will economise the labor of the printing office, or save us from some of the inconveniences attendant upon the illness, incompetency, or, as sometimes happens, the natural perversity of type-setters?" We must say that, for our part, we would rather deal with the crookedness of the compositor. No type-setter has yet been invented equal to Nature's own compositor, and none will yet be invented equal to it until the principle upon which inventors proceed in working out the problem is radically changed. We are shown Kastenbein's machine, in the office of the *Christian Union*, and are told it "works admirably!" but we see one man with a pick and another with pincers, helping along the man who plays the machine, while another corrects and takes up the type, and yet another opens the apparatus and *shakes* up the "supply tubes" or forces open a gate. We find that the distributor does not work with half the rapidity, and is still more complicated. Yet we are told that "the London *Times* uses six of them." That should settle the matter, only it does not; and we feel that even if the London *Times* used fifty of the machines it would make them no better than they are.

The truth is that no machine within the means of the printer has yet been invented which will do the necessary work. No such machine can or will be invented, as we have said, until the principle adopted is radically changed.

Delcambre's Type-setting Machines differ but slightly from those above referred to. These are the only machines we know of in regular use in New York newspaper offices, yet we think that no one could observe the trouble they give, and their rather meager results, and believe that machine type-setting had become a fact. The capacity *claimed* for the setting machine is but 3,000 or 3,500 an hour. Deduct from that the fact that you must have a still more complicated distributor of half the capacity; that these machines are delicate, valuable, hard to sell, and requiring special operators, and the fact that "the London *Times* uses six like them," is but a meager recommendation.

As in this brief notice, in reply to many questions, we are confining ourselves solely to those machines which are most in use or seem likely to be, we will next consider the Westcott Type-Setter. This is in many respects an important machine. In the first place it does away with a distributor, at best a rather absurd part of a type-setter, for it is hard to expect a machine built to *set* type, to be able to undo its work to advantage; it is a cheaper machine, less likely than some others to get out of order, and contains more real power for usefulness within itself than any other. It is not likely that it is the last result that inventors will yet arrive at, but it certainly has high claims. It consists of a compact iron semi-cylinder, containing matrices moved with keys. These matrices travel to a reservoir of melted type composition; the type is made, passed through its gauges and cutters and moved to its proper place finished and cold, more quickly than it could be taken from a box.

We have seen this machine work, and find it to be one of the most ingenious, as it is certainly one of the most interesting machines we have ever seen. It is called, after its inventor, "The Westcott Type-Setting Machine," but it must occur to any thoughtful printer that type making is a very nice operation; that the inspector in a foundry must be constantly at work with his glass and his gauges to discover the smallest changes and differences; that type made as described must be subject to flaws, as indeed are all type; that the cutters and gauges must eventually wear out, etc., etc. Yet practice will soon tell us about these things, and it is possible that experience will remedy them. If so, the occupation of the type-founder, except for fancy type, is modified. Meanwhile we are told that the Harpers have ordered so many, and others so many, etc., facts which say little in favor of the machines, but show that they will be so well tried that printers will know soon enough whether they can use them to advantage or not. The machine is apparently not very fast, but it must be borne in mind that there is no distribution to be done.

Lastly, we must say a word for Orrin Brown's machine, which is, we learn, working to advantage at the present time in Boston. It is on book-work, however, and this is an important fact. It is probable indeed that the first available type-setters will be used for this purpose.

If any questions are answered in the above, the whole object of the article is gained, and we may say that few printers need trouble themselves for some time to come about any advantage they hope to derive from type-setting machines, especially if wanted for small offices.—*Newspaper Reporter.*

Improved Fireplace.—Fredrick Proudfoot, Toronto, Canada, has an invention which consists of a fireplace, provided with an open front and back and a single fuel or fire chamber to enable it to be inserted into partition walls of rooms for heating two adjacent compartments, and so arranged that it can be readily converted into a single or one-front fireplace. The invention further consists in the provision of a suspended fire or fuel basket located in the chamber of the fireplace, and possessing a tubular shank adjustable on a stationary tubular post, said basket being also provided with counter-balance weights to cause the same to be elevated into the chimney when the fuel is removed. The invention also consists in the use or combination with such a fireplace of a steam generating boiler or tank, and pipes to convey steam to the fire-basket for aiding the combustion of the fuel, while the surplus steam is conveyed to the dome of radiation, and finally to the chimney.

How to Treat Burns.—The less that simple cuts, bruises and burns are meddled with, the better. If they are kept clean and excluded from the air, nature will take care of the healing process. The salves and lotions so commonly used are generally irritating rather than beneficial, and hinder rather than hasten the cure. For cuts, a little court-plaster to keep the edges of the skin together; for bruises, wet cloths; for burns, a covering of dry wheaten flour are usually all the treatment, and the very best, that can be used. If from an unhealthy state of the body or from external irritation, inflammation is produced, something more may be required, the remedy varying with the special case.

Steam to Australia.—J. C. Merrill & Co., agents for the Australasian and American Steamship Company, report that the steamer *MacGregor* will arrive in San Francisco on or about the 19th proximo, and sail on Tuesday, the 27th. Clyde-built steamers specially adapted to this line have been built, and will therefore be dispatched on schedule time every twenty-eight days. Annexed are the rates of fare from San Francisco: To Honolulu, first-class, second-class and steerage, $75, $50, and $40, respectively. To Fiji Islands, $150, $125 and $90. To Auckland, $160, $135 and $90. To Sydney, $200, $150 and $100. To Melbourne, $210, $160 and $110.