A PRICELESS PALM.

OF ALL TREES THE COCOANUT IS THE MOST VALUABLE.

The Sea a Vehicle for Its Wide Distribution and Propagation
—Many Uses to Which It is Put.

the 980 or more known palms, the cocoanut palm is at once the most graceful, the most picturesque and the Purchas quaintly refers in his Pilgrimage, when he says: "But of greater admiration is the coque tree, being the most profitable tree in the world, of which in the Island of Maldina they make and furnish whole ships." further idea of its numerous uses is hinted at in the oriental saying that: , 'The attributes of the cocos would fill volume." The Ceylonese claim that it has as many uses as there are days in the year, in substantiation of which they exhibited at the World's Colum-bian Exposition just 365 uses of this wonderful palm.

With many other plants that have been cultivated by man since prehis-toric times the exact origin of the cocoa is not known, though it doubtless came originally from some group of islands either in the Pacific or the Indian Ocean. The greatest difficulty in locating its first home is due to the wonderful provision nature has made in its (ruits for the distribution of the species. The preponderance of fact and ancient historial data would seem to point, however, to an East Indian rather than a Pacific source. Its presence on the east coast of South America, on the coast and islands of the Gulf of Mexico and the Carribean Sea and on the west coast of Africa is known to be due to recent introduc-

tion by civilized men.

The cocoanut palm varies in height from fifty to 100 feet. Its slender

of time, as the fruit ripens, this water becomes in most part of the consis-tence of cream, and finally deposits within the great embryo sack a thick layer of "meat" in which the relatively tiny embryo lies. This coating constitutes almost the entire food of the natives of many countries, and that of



their domesticated animals. Even the skinny, fearsome dog that detects in his every approach to man an opportunity to receive a cuff or a kick will rush frantically to your side should you pick up a coconut and break it, sure of his poor meal within the shell you later cast away.

The spathe that contains the flower

yields on incision a quantity of deli-cious liquid that, when fresh, is called "toddy." This liquid on fermenta-tion produces palm wine, a delightful driuk, as well as a useful yeast for the baker who is fortunate enough to have trunk is never rigidly erect, like that of the royal palm, but leans in grace-ful curve, ascending in its growth. Its foliaged summit is a crown of native tribes. By boiling it is condrooping and ever waving feathery leaves, always grandly picturesque. Although the tree is now cultivated in all tropical countries, often at quite a galese two gallons of a delicious liquid



A COCOANUT GROVE.

distance from the sea, it thrives best which they call "pervin," a sort of and produces the greatest number of thin maple syrup, so to speak.

fine fruits near the beach, where it requires but six weeks to mature a high polish, and when cut in two forms crop of from five to ten nuts, each to 100 fruits.

measures for seed sowing and natural distribution of seed, the nut being carefully and successfully nurtured to the end that it may become a floating vehicle for the germ of a new life that it contains. The nut, when ripe and ready to fall from its lofty height and roll into the sea, has a hard, woody shell, inclosing considerable air space and the elements of growth in the form of a thick white albumen- the meat. This nut is surrounded with a and the whole is invested in a thin waterproof skin which enables the float about in the currents for an sudefinite period, until it is finally cast up on some far off isle or main-land and, rolled inward by wave and wind, finds a final resting place where it may germinate by throwing out and



COCCANUT IN HUSE.

upward a single leaf and rooted from one of the three black-stoppered holes in its smaller end. This readily ac-counts for its wide distribution, and the the and vigor of the cocoa paim that characteristically fringes as smallest and most remote slet in the tropic seas.

a convenient and durable cup or other tree continuing this production until needful vessel. The husk or coir surits annual yield aggregates from eighty rounding the nut yields the best fiber 100 fruits.

The cocoa presents one of the finest cables, especially as such cables float examples of nature's most provident and are practically indestructible by doors, and with such an arrangement water. One of these cables, four inches thick and 250 feet long, together with numerous other coir articles, can ba neen in the galleries of the Field Col-umbian Museum. The Polynesians twist and braid this fiber into small cords that serve in house construction where we would use nails, while the whole husk needs but to be cut in two lengthwise to form an excellent pair of scrubbing brushes. The utility of the nut does not cease here, for the ss of lightly meshed fiber, which ripe meat yields, on pressure or heat-il further augments its buoyancy, ing in the sun, a fine oil for cooking or illuminating purposes, as well as for the toilet. Nothing obtainable is more refreshing under the blazing tropic sun than anointing the body with clean, sweet cocoanut oil. Large quantities of this oil are shipped various countries, where it is used in making pharmsceutic preparations and in the manufacture of candles and

> Not only does the fruit furnish the native with fire, water and food, but the tree his house and all its comforts. The wood is soft internally but hard externally. Small trees are thus readily converted into a system of water pipes or other useful tubes. When old and past fruiting the whole trunk becomes hard, forming the well-known porcupine wood of commerce, and much used where the trees grow for corner posts and rafters of dwellings. The leaves, usually from twelve to fifteen in number, of which from five to six are produced each year as the old ones drop off, are from eighteen to twenty feet long, and make an excellent thatching for both the roof and sides of buildings. Before unfolding these leaves are inclosed in a fibrous heath which is used as a sieve or sheath, which is used as a sieve or strainer, and again for clothing and bedding, while the young unfolded leaf is cooked and eaten like cab-bage. The base of the old leaves a ex-

leaves are also made into fans, parssols and beds, and the sheathes into fish nets and hammocks, while the leaflets serve as paper when written upon with a sharpened piece of the midrib. The smaller ribs are converted by splitting into neat hair combs, while the whole leaf makes an excellent torch, whose resulting ashes yield a potash that in turn converts the oil of the nut into one of the finest of soaps.

of soaps.

In the collections in the botanical department of the Field Museum may be found twines, ropes, mats, cloth, rugs, brushes and various other utilizations of the cocoa fiber, as well as many of the nuts in section, showing the various useful portions of the fruit, together with other kindred palm nuts that yield oils and products of somewhat less extended use. Among of somewhat less extended use. Among these the most curions are the quadrangular cocoanuts of the South Sea Islands and the great coco de mer, or sea cocoanut, of the Indian Ocean, the latter being the largest tree fruit known, often weighing over fifty pounds. In shape this sea cocoanut much resembles a twin growth and much resembles a twin growth, and its peculiar form, as well as its great size, give rise to many varied and superstitious legends among the peoples of the East African and West India coast, who found it washed upon their beaches centuries before they knew of its source in the Seychelles Islands.— Chicago Times Herald.

HOT AIR HEATING.

Practical Suggestions for This Method of Warming Houses.

(Copyrighted 1896.) When a man starts out to build a nouse, after having settled the question of location, size, price and general style, the most important matter that remains to be decided is the method of heating. The larger pro-portion of dwellings make use of the air system, and, all things considered, there is none that is more satisfactory. Hot air furnaces offer very convenient means of communicating warmth to a dwelling of almost any dimensions— its special advantage being that if it is properly managed it constantly brings into the house a large body of fresh air, and so contributes most ma-

terially to the ventilation of the build-

This is effected by a furnace placed in the lower portion of the house, which being duly provided with flues and registers, heats and distributes through all parts of the establish-ment a quantity of fresh air in proportion to the dimensions and capac-ity of the air chamber in which it is placed. A fundamental point of this system is the supply of pure air to this air chamber, which should be provided by a duct or air passage from that side of the house on which the air is likely to be the most pure. But the objections cited against stoves when made with thin plates of metal without any lining to protect them from becoming red hot apply with equal force to a vast majority of hot air furnaces now in use. Air delivered from a furnace should never exceed the temperature indicated by 120 degrees Fahrenheit; where the heat reaches 150 degrees to 180 degrees at the point of delivery, the offects are undoubtedly pernicious.

The principle to be attended to in construction of all hot air furnaces is to generate and communicate the greatest amount of heat with a given quantity of fuel, without producing any change in the breathing property of the air. A common fault is that the water pan is allowed to become empty, so that the heated air has that of pipes that every room will receive its due proportion of heat, there is no system more satisfactory for ordinary houses, nor is any more economical

—an important consideration.

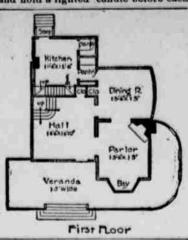
Many house-holders urge objection to the hot air system that at first glance seem to be well founded. They, themselves, have these furnaces and they never tire of recounting their tribulations with them. They say that there are certain rooms in their houses that never get a particle of heat, although they force the furnace so that it eats up coal by the ton and makes the rest of the house unbear-able; and often an impression exists that certain pipes and registers will always be favored, and that one or



HOUSE HEATED BY HOT AIR.

more (generally the one to the north) is bound to go without heat. people will at once dispute the asser-tion that each pipe can be made to draw as well as its fellows, and that every register, properly managed, will throw out its quota of heat.

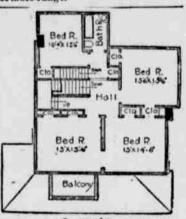
The one prime fault with most hot air heaters is that the cold air box is very much too small. The size of this bedding, while the young unfolded leaf is cooked and eaten like cabbage. The base of the old leavesies expanded until it half clasps the trunk, and the midrib stripped of its lighter leaf tissue forms a hard and durable shovel or paddle, as need may require. By splitting up this expanded part an excellent broom results, or by removing it and sharpening the midrib a spear or arrow is readily formed. The



one in turn. If there is a down draught through one or more of ties registers, the furnace, starved for cold air, is drawing through one of those with the least upward draught in order to discharge it when heated through the others. If your hot air furnace fails to give satisfaction, and furnace fails to give satisfaction, and is of a reliable make and in good condition, investigate your cold air supply first of all; then see that each of the hot air pipes is taken only from the crown of the furnace; that each pipe has a distinct pitch (the greater the better) and finally it may be well to cover the pipes with adverter in or to cover the pipes with asbestos in or-der to prevent them from losing heat by radiation. If you have a good furnace to begin with, do not give up until you have mastered the problem and obtained the results you should obtain.

The accompanying plan is for soonse with hot air heating.

The width of this house including reranda is 46 ft. 4 ins. ; its depth, in cluding front veranda, 46 ft. 6 ins. Its foundation is of stone and brick. The first story, clapboards; the second story, gable, dormers, roofs and ver-anda enclosure, shingles. The cellar measures 7 ft. 6 ins. in hight; the first story, 9 ft.; second story, 8 ft. 6 ins., and the attic, 8 ft. "It is finished throughout with three-coat plaster. The flooring is of North Carolina pine; the trim, white wood; main staircase, ash; kitchen and bath room, wainscoted. The laundry is in cellar under kitchen, and the kitchen has a portable range.



Second FLoor

The first impression of this house is, if built in the northern part of the Jnited States, some people might say that, the chimney being on the outside of the house instead of being run up through the centre, that the open fireplace in the parlor would not give heat; it is not so. If the house faces dry and stuffy quality of which many people justly complain. But with under the centre of the parlor, drawwater constantly evaporating in the furnace, with cold air drawn from outfurnace, with cold air drawn from outfurnace, with such an arrangement and with such an arrangement and with such an arrangement and without the should be about under the kitchen where the word "down" is shown in the floor plan, drawing principally through the chimney shown in the floor plan running through the kitchen and the bedroom in second floor, and if the cold air duct is as large in the aggregate as in the hot air pipes every room should be sufficiently warm enough to heat the house seventy degrees in zero

weather. This house would cost about \$4200 -including the heating apparatus, range and mantel-built within 100 miles of New York City, although in many sections of the country the cost should be much less where labor or materials are cheaper.

The Chinaman and the Plane.

There was a Chinamen who has a laundry on Market street, who went to a musical a few days ago. The press agent for the show struck up quite an accquiantance with John and gave him a ticket, so John went.

I happened to be in the laundry when John returned from the entertainment. He and his partner not been in this country very long. and it was the first time John had heard a piano. I won't attempt to give the dialect, but this is the way he lescribed the instrument to his fellow-countryman:

"They had a four-legged beast which the people could make sing at A man, or a woman, or even a feeble girl sits down in front of the animal and step on its tail, while at the same time hitting its white teeth with his or her ingers, and then the creatures begin to sing. The singing, though much louder than a bird, is easent to listen to. The beasts does not bite, nor does it move, although it was not tied up during the whole evening."—Louisville (Ky.) Commercial.

Maine's Tallest Man.

The tallest man in Maine is W. H. Kelley, of Phillips. He is six feet ten inches tall, and of symmetrical build, weighing more than 200 pounds. He rides a bicycle, which he had to have made expressly for his own use, because of the length of his legs. He is leader of the local cornet band.

CHILDREN'S DRESS.

SEASONABLE GARMENTS WORN BY THE LITTLE ONES.

A Girl's Dress of French Wool Challle -Little Girl's Jacket of Gray Box Cloth-Boy's Sallor Blouse Suit.

N the first double-column illustra-tion French wool challie having leaf green dots on a pale pink ground is daintly trimmed with ground is daintly trimmed with buerre-colored, narrow kee edging and insertion, over green satin ribbon. The dress is exceedingly simple in its construction and stylish in effect, so prettily pointed on its edges. The plain waist has a box plait in centre front that is decorated on each edge with lace edging. The leg-o'-mutton sleeves are fashionably full; they are gathered at the top and finished at the wanted. Buttonholes are made in un-

tive suit, the broad sailor collar, cuffs and shield being of white serge, decorated with rows of narrow blue braid. The blouse is fitted with shoulder and under-arm seams, an elastic being inserted in the hem that finishes the lower edge to adjust it in true sailor style. The fronts are closed invisibly, but buttons and buttonholes can be used if so preferred. The broad sailor but buttons and buttonholes can be used if so preferred. The broad sailor collar ends in pointed lapels that are joined to the cut-away neck in front, the shield portion being simulated by a facing on the underwaist, which is disclosed between the lapels. A pocket is inserted on the left front. The



wrists with pointed, flaring cuffs. A standing collar completes the neck. The full, round skirt is gathered at the top and sewed with a cord to the lower edge of waist, a placket being finished at the back, where it is lapped deeply with the closing in centre. Dresden, taffeta and wash silks, cashmere, crepon and mixed woolen novelties, percale, grass linen, batiste, dimity, gingham, cambric, or other wash fabrics will make extremely becoming and sweetly simple summer dresses by the mode.

The quantity of material 44 inches

wide required to make this dress for a girl eight years of age is 21 yards. Design and hints are by May Manton.

JACKET OF GRAY BOX CLOTH.

In the second large illustration light gray cloth is simply decorated with silk soutache braid in a darker shade, handsome fancy smoked pearl buttons closing the loose fronts in doublebreasted style. The jacket is of fashadjusted by side back gores and s curved centre seam that are sprung below the waist line to give the fash-ionable rippled effect. The stole sailor collar is included in the seam with the rolling collar and closes comfortably at the neck in centre front. Full puffe are gathered and stylishly arranged over coat shaped sleeves that have deep cuff facings of cloth trimmed at the wrists with a double row of braid. Jackets in this style are serviceable Cer waist-bands, and placed on the top to attack the trousers to the under waist, or buttons for suspenders can be put on if so preferred. Pretty suits



DOT'S SAILOR BLOUSE SUIT.

are thus made up in various combinations of materials and colors, black and red, brown and faws, or tan with cream being very stylish. The mode is suita-



and comfortable after heavy coats are laid by, and can be made from plain or faucy cloths in any becoming color embroidery or insertion all being used laid by, and can be made from plain or faucy cloths in any becoming color or of material to match the dress.

The quantity of material 44 inches wide required to make this receir for a child six years of age is 3 yards.

BAILOR TIT FOR BOTH.

Navy blue cloth made this attrac-

to trim suits in this style.

The quantity of material 27-inches wide required to make this suit for a boy eight years of age is 3; yards.

A church now stands on the site of the former slave mart in Zanzibar.