This BOOK may be kept out TWO WEEKS ONLY, and is subject to a fine of FIVE CENTS a day thereafter. It was taken out on the day indicated below:

Lib. 10M-F.'35

ALONG THE ATLANTIC

THE COMPANION LIBRARY.

Number 16.

PERRY MASON & COMPANY
Boston, Mass

THE COMPANION LIBRARY

Is a collection of stories, travel-sketches and descriptive articles, complete, exact, and so interesting as to meet the need of all who want "a book for the leisure hour." It is made up from the works of some of the best writers for The Youth's Companion.

The Library comprises the following volumes, each containing sixty-four pages, illustrated and bound uniform with this book:

No. 1. A Book of Stories: Patriotism, Bravery and Kindness.
No. 2. Glimpses of Europe: Travel and Description.
No. 3. The American Tropics: Mexico to the Equator.
No. 4. Sketches of the Orient: Scenes in Asia.
No. 5. Old Ocean: Winds, Currents and Perils.
No. 6. Life in the Sea: Fish and Fishing.
No. 7. Bits of Bird Life: Habits, Nests and Eggs.
No. 8. Our Little Neighbors: Insects, Small Animals.
No. 9. At Home in the Forest: Wild Animals.
No. 10. In Alaska: Animals and Resources.
No. 11. Among the Rockies: Scenery and Travel.
No. 12. In the Southwest: Semi-Tropical Regions.
No. 13. On the Plains: Pioneers and Ranchmen.
No. 14. The Great Lake Country: A Land of Progress.
No. 15. On the Gulf: Attractive Regions of Contrasts.
No. 16. Along the Atlantic: New York to Georgia.
No. 17. In New England: The Home of the Puritans.

Price 10 Cents Each, Postpaid.

PERRY MASON & COMPANY, Publishers,
201 Columbus Avenue. BOSTON, MASS.

ALONG THE ATLANTIC.

The Companion Library.

Number Sixteen.

SELECTIONS
From The Youth's Companion.

CONTENTS.

		PAGE
THE CAPITOL	HARRIET PRESCOTT SPOFFORD.	3
MOUNT VERNON	HARRIET PRESCOTT SPOFFORD.	9
WASHINGTON'S BIRTHPLACE	JOHN W. EWING.	13
THE LURAY CAVERN	MORTON DEXTER.	16
ON THE CAROLINA BANKS	THOMAS C. HARRIS.	21
GEORGIA CRACKERS	W. F. PATTERSON.	26
PEANUTS	GEORGE B. SPEAR.	32
CHESAPEAKE OYSTERS	THOMAS W. KNOX.	37
MARYLAND FISHING-FARMS	AGNES BAILEY ORMSBEE.	42
HOW MILK IS MARKETED	CHARLES MCILVAINE.	46
THE STATUE OF LIBERTY	MAX OWEN.	51
THE BROOKLYN BRIDGE	WILLIAM H. RIDEING.	55
THE GRANT MONUMENT	C. A. STEPHENS.	59
ELEVATED RAILROADS	MAX OWEN.	62

Copyright, 1898.

PERRY MASON & COMPANY,
Boston, Mass.

The National Capitol.

The Capitol.

No true American can go to Washington and gaze upon the great white Temple of Liberty on Capitol Hill without feeling his heart beat high with pride and patriotism. Critics may tell us that it will not be a perfect building until the central front is built out beyond the front of the wings, and until the main dome is supported by lesser domes that are visible. But nobody cares for critics when looking at the marble pile rising over the velvet turf and lifting its snowy dome like a cloud itself among the clouds.

Wherever you go, in Washington or its neighborhood, turn about, and there is the dome looking over your shoulder. You see it as you approach the city, you see it when you are far down the river, you see it from Arlington Heights, from the Maryland hills, and out at the Soldier's Home, not only through the famous Vista, where it rises out of the surrounding branches all by itself, like a phantom of old Rome, but as you look over a charming landscape where the Potomac gleams like a silver thread out of the deep blue of the haze on the horizon.

The Capitol stands almost in the centre of the plan of the city. The corner-stone was laid in 1793 by Washington. The building was of freestone from Acquia Creek, painted white, and was originally much smaller and more symmetrical. It was burned by the British in the War of 1812, and was only rebuilt after a stormy debate in Congress, assembled in temporary quarters. But with the growth of the country it was found much too small; the extensions were ordered, the corner-stone was laid, with Daniel Webster as the orator of the day, and they were completed in 1863. The structure has cost, in all, about thirteen million dollars.

One would gather little idea of the size of this building by being told that it is seven hundred and fifty feet long by three

hundred and twenty-five broad; one might better comprehend it, perhaps, on learning that its ground plan occupies three and a half acres.

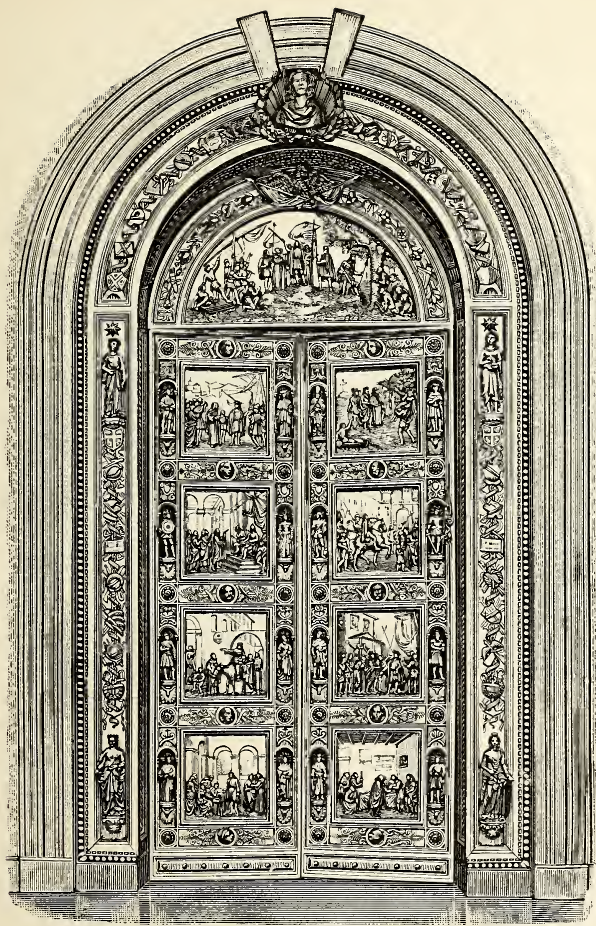
As you stand before it you see that it consists of the old building in the centre, a beautiful thing in itself, of classic style, connected on each side by a corridor of fluted columns with the vast wings, which are built of white marble from Massachusetts, and are each a temple in itself. The one on the south side is the Senate wing; the other is used by the House of Representatives. The whole building stands upon a basement of granite, and beneath that is a sub-basement, hidden by the green turf of the terraces.

Each of the wings has three porticoes of fluted Corinthian columns, every column cut from a single piece of marble. A carriageway runs under the eastern porticoes, by which one enters the basement, the middle entrance opening into the Crypt. On the fronts are the most superb staircases of white marble that can be imagined, supported by immense blocks or buttresses, and so broad and lofty that when one looks at either of them one only remembers the motto: *Sic itur ad astra*. And so it is indeed.

As you mount the central one of the flights, you observe on the pediment, a group carved in high relief representing the Genius of America replying to flattering Hope by pointing to Justice holding the Constitution; a corresponding group, by Crawford, occupies the same position on the front of the Senate wing.

On the flat top of the upper buttress of the main stairway are two groups of statuary, one representing Columbus holding a globe, with an Indian girl at his feet; and the other representing Civilization, or the Settlement of America, by means of a hunter with his dog saving a woman and her boy from the tomahawk of an Indian.

The portico itself here is one hundred and sixty feet long, and carries twenty-four columns, each thirty feet high. In niches at either side of the great doors are colossal figures of



The Rogers Bronze Doors.

Peace and War, and over the doors is another bas-relief representing Fame and Peace crowning Washington.

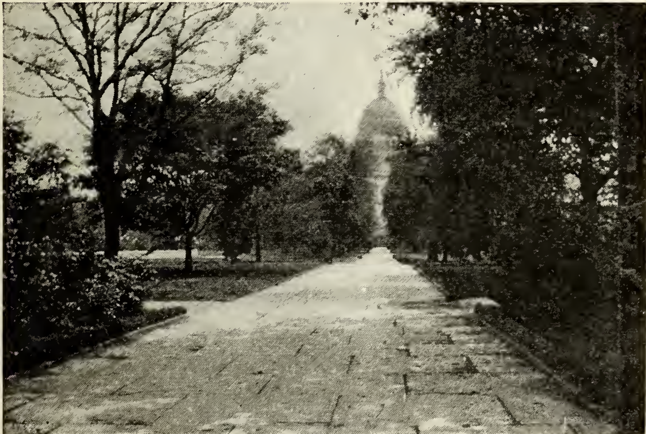
Here open the great Rogers Bronze Doors, nine feet wide and seventeen feet high, of solid bronze, weighing ten tons. They were designed in 1858, and cast in bronze three years later at a total cost of twenty-five thousand dollars. They represent scenes in the life of Columbus, and attract attention not only because of their historical interest, but also by the harmony of design, and the beauty and skill with which their panels are marked out.

As you pause and look back, you have the Capitol surrounded on every side by an ample space of greensward; directly in front of it stretches a paved space in which is Greenough's huge statue of Washington, and on either side of that and beyond it, picturesquely enclosed by low copings of colored stone, is a park exquisitely laid out with flowers and urns, fountains and lamps and many trees.

Over all this beauty towers the dome, rising from base to crest a height of three hundred and seven feet. As it clears the top of the building, it rests first on an octagonal base; above that it is enclosed by columns twenty-seven feet high, surrounded by a balustrade; at the apex is the lantern, fifty feet in height, surrounded by another row of pillars, and on the top of the lantern is Crawford's colossal bronze statue of Freedom. This dome is entirely of iron, painted white, and weighs a little more than eight million pounds. It is supported by solid masonry, and by forty columns carrying arches which uphold the floor of the rotunda.

It is not, by any means, the largest dome in the world; there are several larger, but we doubt if there are any more beautiful, more buoyant and perfect. So you would think if you sometimes saw it early in the morning with the mist streaming away from it as clouds are stripped from a mountain side; or at night when the light burns at the summit, and shines over the town, announcing that Congress is in session, and almost giving it a place among the stars.

In summer, sometimes, when Congress sits in the night, and the radiance gleams from the dome and from all the windows, and the moon shines full upon it, the great white splendor, sitting in the dense greenery of its trees, has seemed the very palace of light itself. One hardly knows whether it is more beautiful then, or when, unlighted above, on a dark night, the lamps twinkle in long distances under the arches of



Capitol from the Mall.

the outer basement, the lines of columns retreat spectrally into the gloom, and the dome soars above, a shadow on the shadow of the midnight heavens; or when, on a spring morning, as one comes up the avenue, one sees it throned above the tree-tops of the western side, that rise from banks purple with violets.

The chief attractions of the Capitol belong to the seasons when Congress holds its most important sessions, but its outward beauty is best displayed in summer-time.

HARRIET PRESCOTT SPOFFORD.

The Mansion at Mount Vernon.

Mount Vernon.

A trip to Mount Vernon is one of the chief pleasures of the springtime to visitors in Washington. The steamer leaves the wharf every morning, skirts the low, green grounds of the Arsenal, and passes the mouth of the Eastern Branch, in the bay of the Potomac, which is overlooked by Arlington Heights, and a little above spanned by the Long Bridge.

The steamer stops at Alexandria, quite an ancient and grass-grown city, where there is a church of which George Washington was a vestryman. Pursuing its way, presently the passengers may see a lighthouse which stands near the Initial Stone marking the Virginia boundary of the district, and shortly after stopping at Fort Washington the boat touches the little wharf at Mount Vernon.

In a hollow, midway between the river and the house, is the tomb of the Father of his Country. Near it are the obelisks of the later Washingtons. Through the grating of the door may be seen the two sarcophagi which enclose the remains of Washington and of his wife.

Here Lafayette paused to do honors to his old companion in arms; and in pledge of peace is a tree planted by the grandson of the king against whom he fought.

The mansion of Mount Vernon stands on a lofty green bluff, and commands a wide and delightful view of rolling woods and river, retreating into that alluring blue mist which haunts Southern horizons.

The mansion house itself is of wood, squared in blocks, of a cream color. It has an immense portico with stone steps, and with large pillars going to the top of the second story, which is surmounted by a cupola and balustrade.

On the lawn is a very large magnolia-tree, planted by Washington himself, and some ash-trees. On one side of the house is a garden also laid out by Washington. One cannot

but think how delightful, in the olden times, life must have been here in summer, when the days are long.

The estate was inherited by Washington when he was about twenty years of age, from his eldest brother Lawrence, who had named it in compliment to Admiral Vernon, with whom he had served. It had previously been used for little more than a hunting-lodge. The new owner added wings to it, which gave it its length of nearly one hundred feet.

Somewhat removed from the house are the kitchens, smokehouse and laundry, the spinning and weaving houses, the remains of the servants' quarters and the stables. New conservatories have replaced the old ones, which were the delight of Mrs. Washington, and which were destroyed by fire. On the whole, it seems to have been rather a princely residence according to the manner of life in its day.

The buildings and grounds were formerly very much neglected. In 1856 the place was purchased by an association of ladies, Mr. Edward Everett writing and lecturing for some time in their aid.

Within, the house used to be desolate enough, cut up into some twenty small, dark and dreary rooms. The dining-room was empty of all save its very splendidly carved marble mantel. The library, where Washington loved to sit over his work, and in which he warmed himself in coming in from the cold on the last evening that he spent out of his bed, was stripped of every book. In fact, nothing was left but Eleanor Custis's harpsichord to tell of the old merry life.

But since the ladies of the association took it in hand it has presented a very different aspect. The rooms have been furnished by the ladies of various states by restoring the furniture of the family or of the generation.

Among others, there is Lafayette's room, fitted up appropriately, and on entering Washington's room you will find restored to it the bed on which he died. His wife, who after his death was unable to open the door of that room, breathed her last, two or three years later, in the room above it.

In one of the parlors are certain portions of Washington's garments, one of his swords, his spy-glass, a part of his theodolite. Copies of Trumbull's and Stuart's portraits of him are in the dining-room, with Rembrandt Peale's painting of Yorktown, which portrays him with his generals about him. Other

The Main Hall of the Mansion.

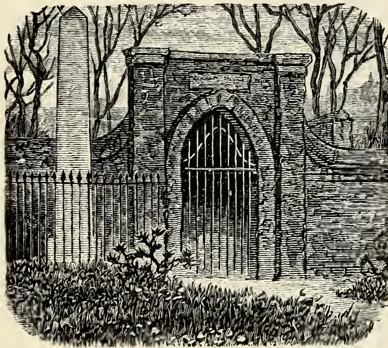
paintings are on the walls, and many objects of note attract the patriotic stranger.

But probably as interesting a thing as any on the place is the great key of the Bastile, which Lafayette sent Washington by the hand of Tom Paine. You feel, in looking at it, the dreadful sorrows and tragedies on which it has turned, and it seems like a seal on our liberties to have it hanging at last in so sacred a place.

Outside the doors, the old gardens, set in their high brick

walls, are exceedingly inviting. The breast-high hedges of box are full of a spicy odor. One sees the descendants of some of the flowers which made life pleasanter to Washington himself, and one crushes wild hyacinths in the grass of the lawn as one walks.

The question naturally arises, what spot can be more delightful than those lawns and gardens on the Virginia hill-sides, with the historic house close at hand, and the senses pleased with the odor of flowers, the songs of birds, and the beauty and stillness of river and forest.



Washington's Tomb.

One is apt to wonder if the groups, gaily lunching and talking and exploring, have any realization of the greatness of the character of the man who so often paced these paths, and so loved the quiet and the pleasure of his farm; if they appreciate the integrity and honor and cool courage, the dignity and devotion to duty, the modesty and the magnificence of Washington; if they ever think that there is no character in history, among its great soldiers and governors, of such simple grandeur, with that equipoise and calm power which are so sublime.

Yet if we could but know, doubtless we should learn that there are few who do not have their love of country and of all manly virtues stirred by a visit to Mount Vernon, and that, as the bell rings and the boat is off, every visitor had been thinking much the same thought.

HARRIET PRESCOTT SPOFFORD.

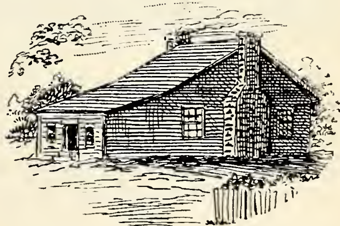
Washington's Birthplace.

In Westmoreland County, Virginia, on the western bank of the famous Potomac River and about seventy miles from the city of Washington, lies Wakefield, the birthplace of the Father of our Country. The old homestead is about one mile west of the town, and upon the crest of a small hill at Pope's Creek, overlooking a broad expanse of the Potomac.

The house itself was a plain four-roomed structure with an immense brick chimney built on the outside at each end. In the best room was a large chimneypiece of Dutch tiles, ornamented with rude Scriptural scenes.

When Washington was a small child the house was burned to the ground, and the family moved to another house on his father's estate near Fredericksburg. This second home so much resembled the Wakefield house that a picture of it gives a fair representation of Washington's birthplace.

All that remained of the first home was one chimney which, being big and built of very large, sound bricks, stood until the autumn of 1893, when it was blown over. The ruins are a great heap of brick and mortar. The bricks are about twice the size of those made nowadays, and the name of the English manufacturer is stamped on the back of each.



Boyhood Home.

The mortar is very firm and hard, despite its exposure to the elements for over a century. The pile of débris is still almost intact, for relic-hunters do not go there. Indeed, most people think that Washington was born at Mount Vernon, which he inherited from his brother Lawrence, with whom he lived much of the time after their father's death.

The birthplace has not always been forgotten, for in the year 1815, George Washington Parke Custis, the grandson of Mrs. Washington, placed on the old foundations of the house a suitable piece of freestone inscribed with the words, "Here, the 11th of February, 1732, George Washington was born," but no care whatever has been taken to preserve that tablet.

After many years of neglect steps have been taken to mark Washington's birthplace with a suitable monument. Such a memorial was suggested many years ago, but it was not until

Site of Washington s Birthplace.

June, 1879, that Congress took any action in the matter. Then an appropriation of three thousand dollars was secured, and the Secretary of State was instructed to see that it was properly expended.

Nothing was done till the following year, when Mr. Evarts, then Secretary of State, after he had returned from a visit to Wakefield, asked an increase in the appropriation to thirty thousand dollars. He also submitted designs for a commemorative structure, to be built of granite with a tiled roof, and a bronze tablet bearing an appropriate inscription.

Bronze doors and windows were to be so arranged with screens that the interior of the structure might be plainly seen from the outside. The proposed building would require no care; would be dignified and graceful in proportions, and be constructed to endure for centuries.

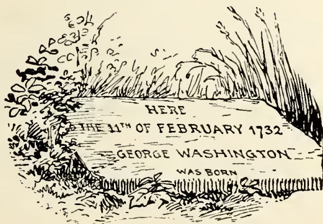
In the year 1881 Congress granted the appropriation of thirty thousand dollars for the purchase of the old homestead and erection of a monument. The Secretary of State immediately secured the transfer of the property to the government, with the right of way to a suitable landing-place.

Then authority was asked for the construction of a wharf of iron screw-piles with a timber deck. Nothing was done in the matter for almost nine years; then Congress authorized its construction, at a cost limited to eleven thousand dollars, to be deducted from the original appropriation of thirty thousand dollars. The Secretary of State at once delegated the execution of the work, and in 1894 it was completed.

So now all the work is done with the exception of erecting the memorial structure, the character of which has not yet been decided upon. Perhaps a simpler and more rugged structure would be better suited to the character of Washington.

When Washington's birthplace shall have been properly marked, it is probable that many who make the pilgrimage to his tomb at Mount Vernon will continue their journey a few miles farther down the river to the old homestead where his inestimable life began.

JOHN W. EWING.



The Luray Cavern.

The Luray Cavern, in the Shenandoah Valley in Virginia, is so much superior to the Mammoth Cave in beauty, that a competent observer, who has visited both, has compared them respectively to a lady's parlor and a great barn.

About a mile west of the little town of Luray lies a gently rising ridge, under which the cavern extends. You might drive by the spot a hundred times without suspecting the existence of anything remarkable. Indeed, the cavern was not discovered until 1878, when a strolling photographer blundered upon its mouth and entered it. Even to-day it contains galleries and recesses which never have been fully explored.

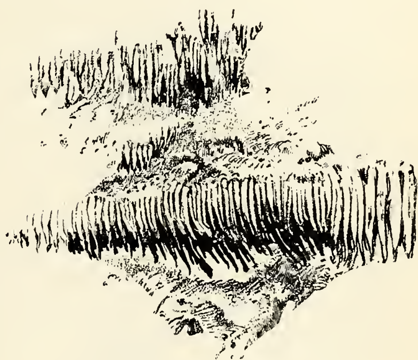
But it has become so well known that more than ten thousand persons visit it annually; and so great are the variety and beauty of its formations that a committee, specially sent from the Smithsonian Institution in Washington to examine it, has reported that, "Comparing this great natural curiosity with others of the same class, it is safe to say that there is probably no other cave in the world more completely and profusely decorated with stalactites and stalagmites than the Luray."

The cavern is a great hollow in a long limestone range. Its cause was the passing of a current of water through the limestone while this was in process of hardening during some past period. After the hollow had been shaped roughly, drops of water, each containing a minute quantity of lime in solution, began to drip from the top. Some clung to the roof and to each other long enough to deposit their burden of lime, and thus points of limestone, like icicles, gradually extended downward. These are called stalactites.

Other drops fell to the floor, and built up a series of pinnacles known as stalagmites.

In time, as the stalactites grew down, while the stalagmites beneath them rose higher, many united and formed massive yet graceful columns. Some drippings from the side walls grew out and crystallized at various angles, and in many diverse shapes, into formations properly called stalactites, but also termed helictites.

These processes still continue, but are so gradual that their annual accumulations are perceptible only by the most skilful measurements. Their result is a palace of wonders surpassing the most marvellous descriptions of fairy-land which the human fancy has invented.



Fish Market.

Entering the little house above its mouth, the visitor pays a dollar, puts on overshoes to guard against the damp floor of the interior, receives a tin reflector holding a candle or two, and follows his guide into the opening.

The principal halls and galleries have been supplied with incandescent electric lights; but candles still are necessary to illuminate the deeper recesses, and also many particular formations, the beauty of which is in the exquisite proportion and finish of their details.

Without expert aid many of the most noteworthy sights would be overlooked. The guide also acts as a watchman, for thoughtless or malicious visitors have injured certain formations in an effort to obtain souvenirs.

The guide leads the way down a dim, sloping passage. As you emerge into the light cast by an electric burner, he remarks, "This is the Vegetable Market." You look around and catch your breath in surprise.

In a large alcove at one side you behold, hanging from the

roof or the walls, or piled upon the floor, what seem to be hundreds of beets, carrots, turnips, potatoes, bunches of asparagus and heads of cabbage, each only a stone, yet almost as perfect a reproduction of the familiar vegetable as if a skilful sculptor had chiselled it.

You find it hard to believe that nature alone is responsible for these apparent carvings. They bear examination, too. The illusion does not vanish. It does not depend upon contrasts of light and shade, nor much upon the aid of the imagination. They are nearly as like vegetables as if they had been carted in from the neighboring farms.

Soon you enter the Fish Market, which is similarly amazing. Here the limestone has taken the forms of fishes, and you seem to see tons of perch, trout, bass and shad hanging or lying in orderly rows. The illusion is completed by the drops of water which drip from their tails.

Turning a corner, you enter next a vast gallery, five hundred feet long and one hundred wide. Although not proportionately high, it is larger than many a cathedral. It is the Elfin Ramble; and if ever the underground fairies desired a play-room vast enough for a multitude at once and full of hiding-places, they had it here.

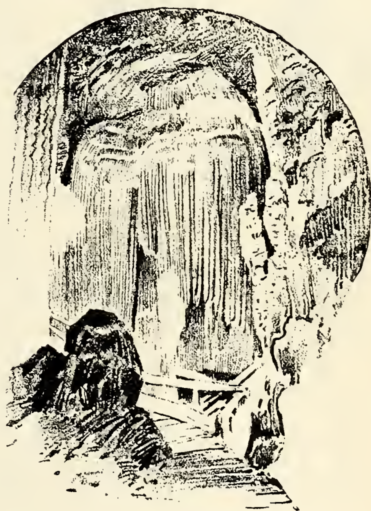
A little farther on a shallow pit is seen, which has a petrified human bone embedded in its bottom. The guide here relates the legend of Massanutto, an Indian chief, said to have deserted his squaw for a pale-faced bride, and therefore to have been shut into the cavern to die by his tribe.

But what is this? A blanket hung from a line? Yes, and not only in shape, size and apparent texture does it seem genuine, but red bands run evenly across it, a few inches from the edge, reproducing the stripes upon a real blanket.

And what is this? You hardly need the guide's reply, "This is the Saracen's Tent." The peculiar, dome-like canopy and the gracefully flowing curtains which formed the Oriental tent are before you in this stately yet exquisite structure of stone, into which you actually can enter.

Next comes the Giants' Hall, less beautiful than grand, but fit for an assembly of the Titans, containing several enormous connected rooms forming one huge apartment. Gigantic columns rise on either side, some simple shafts, of which the only striking features are their massiveness or their symmetry, and others adorned with capitals and decorative work, like those of the old Egyptian temples.

Hovey's Hall, near by, exhibits quite a number of well-proportioned statues, some being draped with much grace. These lack distinct features, but at a short distance one almost might imagine one's self in the Louvre. One such statue, dimly visible in Pluto's Chasm, a deep cleft in the side of the cavern, well merits its title, the Spectre.


Saracen's Tent.

An object which lingers long in memory is Titania's Veil. Passing around an enormous column into a huge recess, one perceives, as it hangs loosely in folds from a sort of branch, a surface resembling the veil of a bride. It is transparent, and its texture and ornamentation are like those of delicate lace. No masterpiece of the looms of Brussels or Valenciennes ever surpassed its indescribable elegance. It appeals most strongly to the feminine eye, yet all appreciate something of its rare beauty.

Another charming spot is the Bridal Chamber, which contains many of the furnishings of such a room. There is a cathedral also, which alone would reward a visit, with its fine columns and the tracery of its roof. Moreover, it contains an

organ, which has pipes almost as regular as those to be seen at York or Canterbury.

The Chimes deserve mention, too. At one point the guide indicates a group of five small columns, by striking which with a mallet he produces a succession of sweet, bell-like tones delightfully musical.

Frozen Fountain.

At another place a frozen cascade, as wide and high as the side of a large house and glittering like an Alpine glacier, leaps from the wall of a deep recess.

The prevailing color of the walls is a dull cream-white, but there are streaks or surfaces as dazzling as alabaster, and others are tinted in red or blue. Here and there in the cavern also are charming pools, and even lakelets, so transparent as to be almost invisible. Indeed, many a visitor has stepped into one before discovering where he was.

These are but a few of the wonders of the Luray Cavern ; it is impossible to describe them adequately. That there is a limit to the power of language is never realized more distinctly than when one tries to portray such marvels.

MORTON DEXTER.

On the Carolina Banks.

Bogue Banks is the name given to the strip, or rather the strips, of land which lie off the coast of North Carolina, and follow its course from Beaufort Inlet toward Wilmington. The banks vary in width from a few hundred yards to two or three miles, but whether wide or narrow, they are nothing but sand-banks.

Along the entire seaboard of North Carolina the mainland is separated from the ocean by a narrow fringe of such sand-banks, leaving Currituck, Albemarle and Pamlico Sounds on the land side of them, and forming a frail and insignificant-looking but impassable barrier to the ocean waves. At intervals these banks are perforated by inlets, which form a means of passage from the sound to the ocean.

Since they are composed almost entirely of fine white sand, the surface of these banks is constantly moved and shifted by the winds, and heaped up into conical hillocks called sand-dunes, which are from fifty to a hundred feet in height.

Along the ocean side the banks are almost entirely destitute of vegetation, and no sooner does the wind drift the sand into a little hillock than it begins to tear it down and move it elsewhere, or to carve it into fantastic shapes by its ever-varying changes of direction.

Sometimes a hill of considerable size seems to move bodily in one direction without a change of shape, and even to overwhelm houses if they happen to be in the way.

The movement is merely one of the surface sand, and if the wind happens to blow for a long time in one direction, the constant movement of loose particles from one side steadily cuts away that side of the hill, only to deposit the material on the lee side of the hill, where the draught is not so strong. This will account for the apparent movement of the whole mass together.

It is a curious sight to stand on a tall dune and see miles of these conical hills of snow-white sand, with the constant thunder of the Atlantic waves on one side, and the placid waters of the sound and its fleet of little fishing craft and oyster-boats on the other.

During heavy gales from the east, the ocean spray is blown entirely across the narrow places, and the waves sometimes bury many acres out of sight for a time, making such places too dangerous for a habitation. A complete system of life-saving stations is in operation during the winter months.

Occasional areas of tall marsh-grass, with patches of live-oak and palmetto, form the only green coloring to the scene. Droves of wild ponies, called bankers, subsist on the scanty vegetation. They wade far out into the sound for the marsh-grass, and paw holes among the sand-hills to procure fresh water.

Bankers.

Once a year these ponies are corralled by the owners, and the occasion is called a pony-penning. At such times the young colts are branded, and the surplus stock is carried to the mainland for sale.

The ponies are rough and hardy little animals, and need to be broken to the saddle or harness like the wild horses of the Western prairies. When first taken from their native shores they know no food except marsh-grass, and need to be taught to eat in a civilized manner of hay and oats. Sometimes one will almost starve before learning to take strange food out of a manger.

A sparse population of hardy fishermen inhabit these banks, and subsist mainly on fish and game. They are practically cut off from the rest of the world, and seem to know and care nothing for its fashions and follies.

They are content to eke out a scanty subsistence, with an

occasional windfall in the way of a wrecked vessel or the capture of a whale.

Perched on the very top of a small sand-hill, near Fort Macon, there is a strange-looking hut or wigwam built of rushes or tall grass. Its thatched sides and roof have a queer, foreign look, reminding one strongly of the huts used by the native tribes of Africa.

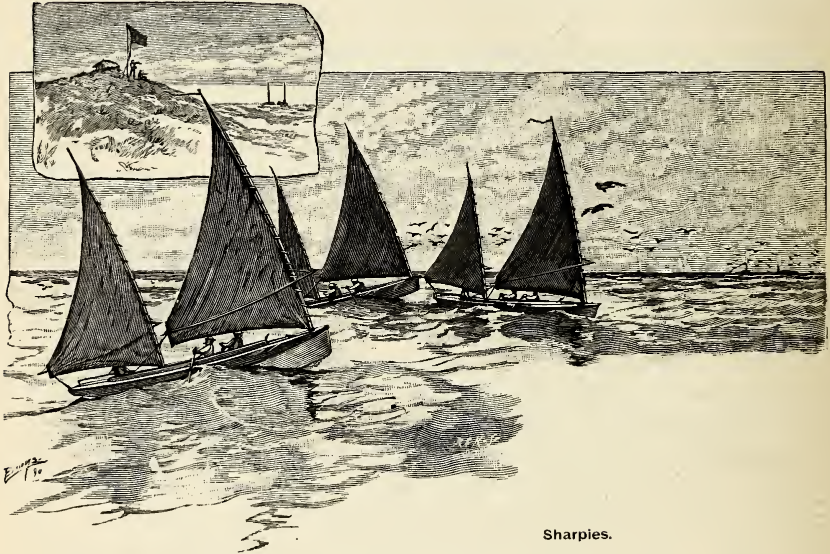
It is the shelter of the fisherman on the watch for whales, which are frequently seen and captured near Cape Lookout in February and March. From his elevated place the sentinel can overlook all of that great bend of the shore just south of the cape, and if a whale blows within ten miles, he hoists a flag to warn the fishing crew at Beaufort, several miles away and on the opposite side of the sound. An exciting chase now begins. If there are several boats in the chase, the different crews strain every nerve to be first in the battle.

The fishermen here use a peculiar kind of sailboat called a sharpie, which has a flat bottom, a very sharp bow and an immense centreboard. It spreads a large area of canvas in triangular sails, on foremast and mainmast.

This style of boat is not often seen except on this coast, although it is reputed to sail closer to the wind and be faster than any other. The sails are strained very taut and flat by means of a peculiar boom across the lower and widest part of the sail, and this will explain, in part, its remarkable sailing qualities. The equipment of a crew consists of the ordinary harpoons and lances with the addition of the modern bomb-gun. The last-named weapon is the main dependence of our whalemen, and is usually very effective. Beaufort fishermen do not hesitate to follow a whale many miles out to sea, for if successful their reward is great.

Large numbers of porpoise are caught near these banks in seines made for the work. They furnish some oil, but are sought for mainly for their hides, which make an excellent leather, very soft, strong and flexible. Much of it is cut into shoe-laces, to which it is specially adapted.

The wooded parts of these banks afford hiding-places for deer, and being not very accessible the deer are not often hunted. During the winter months the sounds swarm with many varieties of wild fowl. Ducks, brant, geese and swans may be seen in countless flocks. To a sportsman fond of this



Sharpies.

kind of shooting there is abundant opportunity to test his skill and endurance.

In the summer and autumn months the waters about the different inlets are alive with fish. Here the sport with hook and line is probably better than it is anywhere else on the Atlantic coast. Trolling for bluefish and Spanish mackerel is the favorite method of fishing, and is quite exciting. It does not differ except in minor details from the bluefishing in more northern waters, but is rather more exciting on account of the speed of the boats.

In the more shallow waters of the sounds bottom-fishing is much practised, both for pleasure and profit. The boat is anchored in three or four fathoms of water, and the fish-lines are dropped over the side.

Trout, blackfish, sheepshead, small sharks and many other kinds of fish are thus caught. Ladies and children often derive much pleasure from this style of fishing, and it is a frequent occurrence to haul in three or four fish at once.

In places along the shore are still to be seen mounds and shell-heaps of considerable size. They are supposed to have been made by the various tribes of Indians who frequented that part of the coast before the discovery of America by Columbus, and who probably subsisted mainly on fish. Bits of broken pottery and stone implements leave no room to doubt that these shell-heaps were the work of the aborigines.

In many places along the banks the Carolina tea, called yapon, may be seen growing. Its botanical name is *Ilex Cassine*, and it is of the same genus as the mate, or Paraguay tea of South America.

The natives often use the yapon as a beverage, as a substitute for tea or coffee, and by many it is highly esteemed. It possesses valuable medicinal properties also, and was the source of the black drink of the Southern Indians, who considered it a panacea.

Since these banks serve as an effectual barrier to the ocean waves, and many rivers continue to pour into the sounds their constant streams of water and sediment, it is merely a question of time that the sounds will become more and more shallow, until they will finally appear as marshes of reeds and grass and afterward dry land.

THOMAS C. HARRIS.

Georgia Crackers.

Among the many peculiar sights that a traveller sees in a Georgia town is the clustering together on some street of rough and rickety carts, mud-covered, and drawn generally by a bull or an antiquated mule.

There is an air of shiftlessness about them which at once attracts you; a piece of rope for a trace, the harness patched up and held together with wire or cord; or it may be the driver is a tall, lank man with a heavy growth of hair, a rough, unkempt beard, a broad-brimmed felt hat jammed down upon his ears and a general appearance as if it were too laborious a thing to live.

Whatever it is that attracts you, whether mule, or cart, or owner, or perhaps curiosity as to the cart's contents, at any rate you stop and ask a bystander who those fellows are and where they come from. He will say, "Oh, they're some of the po' white trash that live out in the country. Georgia Crackers we call 'em."

A person cannot travel very far through the South without hearing frequently of the Crackers, and curiosity at once prompts you to learn more of them. You go up to the group and ask one of them what he has in his cart, and a reply will come back in a peculiar, drawly tone, "Fat-pine kin'lin's, two bunches fer a nickel. Come twenty mile with it since mornin'."

You are not in immediate need of kindlings and so move on to the next cart, which looks more pretentious. Its load consists of two or three pairs of chickens, some eggs, and a small general assortment of dairy products. Another cart has wood, a hog or a small calf, or small holly or bay trees for garden decoration.

The whole group forms a picture which is highly interesting. These are some of the poor Southern farmers called pretty

generally through the South, Crackers, famous alike for their peculiar mode of life, their hospitality and their laziness. As is generally the case with a true lazy man's philosophy, they take great pains to attain a very small result, often coming miles to a town to sell a dollar's worth of goods.

Let us follow one of them in his weary march homeward, over the lonely road, climbing up behind the slow, plodding bull, or else walking beside the cart as it winds its way steadily through the forests of yellow pine and oak trees, which line the road on either side.

The road-bed is of clay and it has a rich red color that fits in well with the dark green of the sombre and stately pines. The oaks and other hardwood trees are leafless, for it is the last of December and the foliage has long since fallen. The holly trees, with their red berries, alone are bright and cheerful.

A Bull Team.

Although the scene is sombre and lifeless, yet the coloring of sky and woods and road is extremely rich and the mighty stretches of unbroken pine forests are always awe-inspiring. But in spite of the beauty and sublimity of our surroundings, the ride soon becomes tedious and tiresome ; for the old black bull moves along very slowly. We haven't yet learned to follow the lead of the owner, who is already sound asleep on the bottom of the cart, trusting to the patient animal to take him home in safety.

We haven't passed a house for some time now, and are just commencing to despair of ever reaching the end of our journey, when a light appears faint and far off through the trees.

The old bull seems to recognize it and quickens his pace. Soon we turn off the main road and go bumping over the roughest of roads through the woods. The jolting at last awakens our host, and he comforts us with the assurance, "Most thar neow." A few minutes more of torture and then the bull stops in front of a small log house in a clearing, and we are at last at the home of a typical Georgia Cracker.

The house has no windows at all, but the logs are so loosely and unevenly put together that the cracks are large enough to let in plenty of light, and also rather more air than would be pleasant on a chilly night.

The roof is made of rude slabs and hewn shingles, nailed on in a way that is very typical of its builder and owner, but which could hardly be called water-tight.

The chimney is built entirely on the outside of the house, the lower part being made of stones picked up off the farm and cemented by the common red clay on which the house rests, while the upper portion is made of sticks laid crosswise and cemented on the inside and outside with the same clay, and finally, to hold the clay in place, boards are braced against it from the outside.

These clay chimneys are seen all over the State of Georgia, and often excite wonder in the minds of travellers at the way in which they are built and how it is that the houses to which they are connected do not burn up.

There appeared to be little difference between the shed used as a shelter for the bull, and the house used for the man's abode, except, perhaps, a slight difference in size, and in the fact that the upper part of the shed, which is used to stow away a winter's supply of corn-stalks, is all open on the ends.

The house was in a picturesque location at the base of a wooded slope on the bank of a small stream. Near by was a small cotton patch, and next to that a corn-field of about two or three acres in extent. This was all the cultivated land visible.

While we are looking at the outside of the house and its

surroundings, we are in turn being gazed at by a group of brown-faced, tow-headed children, who seem to find us as strange and curious as we find them and their home.

There are seven of them, three boys and four girls, the oldest boy being about sixteen or seventeen years of age and quite tall, and the oldest girl being about fifteen. All seemed healthy, strong children, their faces tanned by contact with the

The Home of a Georgia Cracker.

weather; and although they could hardly be called intelligent-looking, yet they were not without good looks, especially the younger ones.

The boys were all clothed in rough cotton jeans, homespun and homemade, and were barefooted, excepting the oldest, who had so far approached the dignity of manhood as to be the possessor of a heavy pair of topboots. The girls were also clothed in homemade cotton cloth, and were without ribbons or decorations of any kind, and all were barefooted, as was also

the mother, who came forward to welcome us with the usual free hospitality.

We entered the house and found a bright fire burning in the fireplace, which served the double purpose of heat and light. No lamps are used by these people, not even candles, and the only light obtainable is that of the fat pine fire.

There was very little attempt at order or decoration in the house. A few cheap chromos, most of them advertisements, decked the walls, and a piece of looking-glass about a foot square was fastened up over a table which holds the common basin and pail of water.

In one corner stands the spinning-wheel and loom, with which the mother makes all the clothes. Near it is a little cupboard, loosely built of rough boards and containing a few dishes, many of which were the worse for wear, and also a few cooking utensils, chief among which was a large iron pot.

On the top of the cupboard was a small wooden clock that had long since ceased to tell of flying moments, whether from lack of winding or not is a question not answerable.

Two chairs drawn up before the fireplace, and three beds completed the furniture of this one-roomed mansion. These three beds were arranged side by side at the farther end of the room, one for the girls, one for the boys, and the last for the parents.

As there were only three in the house, and all seemed to be pretty well supplied with occupants, we wondered where we were to sleep; but when the time came for retiring, which happened about half-past eight, or very shortly after we arrived, the three boys, without waiting to be told and without murmur, coiled themselves up on a pile of cotton in one corner, leaving us their bed.

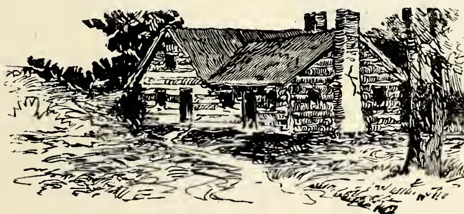
This primitive mode of life might have many embarrassments to a stranger, but there is no disrobing at night among these people, farther than the taking off of boots and hats, so there is nothing to do but to throw yourself on the bed and go to sleep if you can.

In the morning we arise early, wash at the common basin and use the common towel, and then are given a spoon each and invited to dip into the pot of steaming corn-meal. As an extra treat coffee was served, but without sugar or milk. Such is breakfast, and such would have been dinner and supper, with perhaps a piece of pork with the meal; but we did not wait for any more, and after thanking our host we start out for the next place, to try and hire a mule to drive us to the town again.

To those whose ideal of life is one close to nature there might be many points of attraction in the lives of these people. They retire early and rise with the lark; they do no more work than is absolutely necessary for an existence, rarely looking ahead; living in one room together; eating their standard dish of yellow meal out of a common pot, and drinking their home-made corn-whiskey out of a common bottle; caring little or nothing for education or religion in any form; hospitable and kind to all but revenue agents, and are fairly moral and honest.

But to those who care for any of the comforts or advantages of civilization, one visit to the homes of the Georgia Crackers will be enough, and they will never more long for an earthly Utopia where wants are few and all things are held in common.

W. F. Patterson.



Peanuts.

Many people would mistake a field of growing peanuts for a field of clover. During the Civil War the boys in blue often ran with eagerness into clover fields in search of peanuts, and could not be convinced of their mistake until they had pulled up a considerable number of the roots and had been roundly laughed at by their more knowing comrades.

The peanut, sometimes called ground pea or ground nut, is known in the Southern States as the pindar and goober. It is generally believed to be a native of Africa, where it is the principal food of some of the Congo tribes; but four or five species of the nut are found growing wild in Brazil.

In this country it is raised principally in the States of Virginia, North Carolina and Tennessee, and has been more recently cultivated in California.

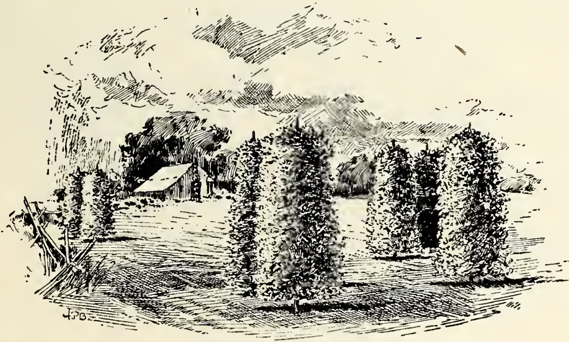
The culture of the peanut is not difficult. Land suited to the raising of corn or melons is generally selected, and care is taken that there be nothing in the ground that would stain the shells.

Peanuts.

Planting-time begins when the danger to plants from frost has passed. The ground is plowed five or six inches deep, and then harrowed. The nuts are taken from the pod without breaking their skins, are planted two or three together in rows about three feet apart and twenty inches from hill to hill, and are covered with two inches of earth. Five pecks of shelled seed are needed for an acre. The work of planting was formerly done by hand, but it is now done by a machine, with which one man can plant six to eight acres a day.

When in a short time the vine is eight or ten inches long and begins to blossom, it is covered with an inch of soil, care being taken to leave the tip end uncovered. The vines blossom profusely with small yellow flowers, and as the flower fades away a sharp-pointed stem grows out from its base, turns downward and buries itself in the ground; on the end of the stem a thick-shelled pod forms, and enlarges rapidly.

All the care that is necessary after the stem returns to the ground is to keep the land free from weeds. The cultivation consists in running a plow between the rows. After the plants



Stacks of Peanuts.

have fallen over, they cover the earth so thickly as to smother all other growth.

In October, when the nuts are ripe, the farmer loosens the earth by running a plow under each row to cut off the main roots and throw out the pods. Then he pulls up the vines, to which the nuts adhere, and turns them over to dry. He performs this work only in pleasant weather, and when the ground is dry.

After the vines have lain in the sun for a day, which is generally a sufficient time for drying them, the grower stacks them around a stake about seven or eight feet high. The

vines remain in stack from three to five weeks, after which the nuts are picked off, placed in sacks and shipped to market. A vine under favorable conditions bears more than a hundred nuts, and the yield per acre averages forty bushels.

Most of the Virginia and North Carolina crop, which is about two-thirds of the whole crop of the country, is marketed

Picking from the Vines.

in Norfolk and Petersburg, Virginia. In each of these cities are factories where the nuts are bought as they are delivered by the farmer. The nuts as they appear at this stage, with earth and their stems still clinging to them, are hardly to be recognized as the bright nuts we afterwards see on the corner stand.

To polish them, and to remove the earth and stems, the nuts are scoured in large iron cylinders, from which they pass through blast fans, in which a strong current of air separates the fully developed nuts having sound kernels from those imperfectly filled, and from empty pods.

The sound nuts fall through the fan upon picking tables,

where those which are discolored are taken out, and the bright ones are passed on into sacks which will each hold about one hundred pounds of nuts. Each sack is marked with the brand which indicates the grade of its contents.

The dark and the partially filled nuts are shelled, and the kernels are used by confectioners in making peanut candy. The work of picking over and separating the nuts is performed by little girls, about twenty of whom are employed at every table.

Three varieties of peanuts are grown in this country, the white, the red, and the Spanish. The white, which is the most important variety, has two kernels with pink skins; its vine spreads along the ground, unlike that of the red variety, which grows more upright and in a bunch.

The pod of the red nut holds three and sometimes four kernels, and has a deep red skin. The Spanish is a much smaller nut, with a lighter skin and milder flavor than either of the others. The entire crop is shelled, and used especially in that rich confection known as nougat.

Separating the Nuts.

The history of the competition between the home product and the imported peanut is interesting and gives one some idea of the importance of the peanut trade. In 1872, and for several years previous, there were annually imported into New York a half million bushels of peanuts, the greater part of which came from Africa, and the rest from Spain.

The American farmers gradually awakened to a perception of the profits to be made by raising the nuts. Melon patches were turned into peanut fields, and in 1878 the seed of the Spanish nut was planted in Virginia. The product was found to equal that of the foreign nut, and as it cost two or three

cents a pound less to market the crop, it was not long before the imported nut was driven from the market. At present Virginia, North Carolina and Tennessee count goober-raising as one of their chief industries.

The peanut is a more useful product than people in general think it to be. We all know how eagerly it is sought after in the roasted state to help boys enjoy a baseball match or a circus; but its use in the roasted form by no means measures the extent of its value, or the variety of the uses to which it is put.

The nuts contain from forty-two to fifty per cent. of a nearly colorless, bland, fixed oil, which resembles olive-oil and is used for similar purposes. This oil is principally employed in the manufacture of the finer grades of soap.

In 1883 Virginia began to manufacture peanut flour, which makes a peculiarly palatable biscuit, and North Carolina has long made pastry of pounded peanuts. It is also eaten for dessert, and it is roasted as a substitute for coffee.

The peanut is very nutritive. The negroes use it in very many places in making porridge custard, and prepare from it a beverage. The vine forms a fodder as good as clover hay, and hogs fatten on what they find on the fields after the crop has been gathered.

George B. Spear.

Chesapeake Oysters.

The value of Chesapeake Bay for other purposes than those of navigation is in its oyster and fishery trade. Not counting rowboats, there are fully a thousand craft of various sizes engaged in the collection and transportation of oysters in and from Chesapeake Bay, and a large amount of money is invested in the industry.

The oyster-beds are theoretically under the control of the State of Maryland, and its legislature has passed laws intended to regulate the trade. From time immemorial there has been a vast difference between theory and practice, and Chesapeake Bay furnishes no exception to the rule. The laws are openly violated, and piracy has flourished on the Chesapeake as it flourished on the Spanish Main and other parts of the high seas in the seventeenth and eighteenth centuries.

There are two ways of taking oysters from their beds: by tonging and by dredging.

In the first method the oystermen use tongs with long handles; a pair of tongs, with its jaws open, is lowered to the bottom, and then the jaws are slowly brought together to secure whatever oysters come within their grasp. In the other process a dredge, or large rake with curved teeth, is drawn over the oyster-bed. When the dredge is filled with oysters it is brought to the vessel's side by means of a windlass, and the contents are placed on her deck.

There are certain grounds where dredgers may work without interference, and certain other grounds, where the water is shallow, which are reserved for the tongers, and leased by the state to companies and individuals.

The tonging process is slow, but it is not destructive; dredging is far more rapid than tonging, but it is terribly injurious to the oyster-beds where the water is shallow, as a dozen oysters are destroyed for every one that is secured.

The law prohibiting dredging in the shallow waters was enacted in order to preserve the oyster-beds, and raise a revenue for the state, which claims jurisdiction over the bay. The complete ruin of the oyster industry there is threatened unless dredging is prohibited, and the friends of the law say

Where Dredges are Made.

that in a few years there will be no oysters left for either dredgers or tongers to gather.

To protect the beds from pirate dredgers the State of Maryland has an oyster police with its steamers and sloops. Down to a few years ago the pirates were held fairly in check by the navy, and their depredations were not very serious; occasionally they came down at night and sailed across the forbidden grounds during the darkness until their dredges

were filled, and they were off and out of sight before daylight, unless detained by adverse wind or no wind at all.

There have been many conflicts between the dredgers and the Maryland navy; these conflicts were bloodless for the most part, as the police were instructed to fire only at the sails and rigging of the pirate craft, and must not shed blood except in self-defence.

But sometimes the fighting became severe owing to the vigorous resistance of the dredgers, and the bullets did more than make rents in sail-cloth. Policemen and pirates were wounded, and in some instances killed, during these encounters, and the pirates on more than one occasion were completely victorious.

The pirates argued that they had a right to take oysters anywhere and in their own way, and they prepared to defy the law openly. When the vessels of the navy appeared some of the dredgers surrounded and fought them, while the rest went on with their work without interruption.

Occasionally the pirates boarded the vessels belonging to the lessees of the oyster-beds and forcibly took away whatever bivalves they had on hand; if a despoiled tonger offered any protest he was knocked down and silenced, and in case he made any resistance to being plundered he was flung into the water and had to take his chance of being drowned.

After a few experiences of this sort the tongers lost patience and began to strike back. The lessees of the grounds armed some of their men with rifles and other weapons, and fights between tongers and dredgers were of daily occurrence. Sometimes one party was victorious and sometimes the other; but the dredgers were the more numerous and powerful and the tongers suffered accordingly.

The dredgers proceeded to fit up their vessels for war; they provided themselves with Winchester rifles, which were placed in racks as on board a regular naval vessel, the crews were armed with revolvers, and some of the larger schooners had swivel cannon mounted on their decks.

One of them actually came out one day with a black flag displayed at her topmast and a plank rigged at the side as an intimation that any prisoners might expect to walk the plank in the style of the old-fashioned freebooters of the sea.

For some time the dredgers actually drove off the tongers

Oyster Pirates.

from the reserved grounds by firing upon them whenever they appeared, and when a police-boat went out to interfere, she was fired upon, too, and her assailants were so numerous that she was compelled to retire.

The strife has broken up families. A tonger went out one day and was fired upon from his son's boat, his son having

gone into the dredging business and turned pirate. The fishermen in the same neighborhood were prevented from setting their nets, and a party of gentlemen who have a duck-shooting club on the shore were also fired upon by these nineteenth century buccaneers.

The tongers of Kent Island bought an old cannon and placed it in a position to command their grounds. When the dredgers appeared the battle began ; the tongers were getting the best of it when their cannon burst, happily without injuring anybody. Then the dredgers went to work and filled their boats. Imagine the feelings of the tongers as they helplessly looked on and saw their oysters dredged up and carried away !

Many of the dredgers are from the eastern shore of Maryland, but the larger vessels are from Baltimore and other Maryland ports, and also from New York. There is much difficulty in obtaining crews for these craft which openly defy the law. It appears that the owners and captains are as lawless in the treatment of their men as they are in obtaining their cargoes.

These men are compelled to work from four in the morning till nine or ten at night ; are fed upon bread and a nauseous mixture called coffee. They have neither beds nor shelter at night, and are exposed to rain and snow and cold all through the winter months.

They are frequently maltreated, and often cheated out of their wages. In short, the lot of the pirate before the mast has always been a hard one, whatever may be that of the captain or the owner of the vessel.

THOMAS W. KNOX.

Maryland Fishing-Farms.

Nothing could be more strongly contrasted than the lives and methods of the New England farmer and the farmer of that long, level peninsula known as the Eastern Shore of Maryland, lying between the Chesapeake Bay and the Atlantic Ocean. In driving along the smooth clay and oyster-shell roads of the Eastern Shore, the first thing that would make the Northern farmer sigh with envy is the absence of stones, big or little. About the only homes to be seen close beside the main roads are the small whitewashed cabins with chimneys built outside, belonging to those negroes whose thrift has secured the coveted five acres and a mule.

The real farmhouses are often half a mile back from the road. A long, private driveway, called the lane, leads to them, through an avenue of trees. The front door of the large, rambling house opens on the lawn, always generous in its size, while the rear door of the hall is equally sure to open on a broad piazza looking out on the bay. The true Marylander is proud of his water-front, and the first hospitable invitation is to come and see the view or to walk out to the bank.

A few of the farms on the main arms of the bay can boast a tiny beach, where the water laps the yellow sand in true seashore style, but for the most part grass grows to the water's edge. Every farmer has his sailboat, and social life receives a constant impetus from it. Calls are made, evening parties come and go, and business engagements are comfortably attended to by boat. Coal for the furnaces, ice for the ice-houses, which must be bought after a mild winter, and freight of various sorts are landed at the small docks.

But the financial help which the bay gives the owners of water-farms is greater than all. A goodly portion of the living comes from its waters, and the sales of fish are great aids to make farming pay. Farms which have a good water-front are

worth nearly twice as much per acre as inland farms, but are rarely for sale, as they are kept in the same family for generations.

Six hundred dollars from the season's sale of fish is a fair return for a farm of two hundred and fifty acres with half a mile of shore lines, while many years show even greater gains.

Driveway to the Farmhouse.

The cost of nets, boats and other needs averages about one hundred to one hundred and twenty-five dollars a year. The farmer usually conducts his fishing on shares with the regular fishermen, and if, at the end of the fishing season of sixty days, he has two or three hundred dollars for his half of the profits he is satisfied.

The outlook along the shore of these fishing-farms is

curious. By each farm there are two or three long lines of hedging, running out from the shore. This hedging, which begins in moderately shallow water and not directly at the shore, is made of heavy poles or piles driven into the water, each one from twelve to twenty feet in length, according to the water's depth. It is capped at intervals with long poles, to which heavy twine nets are fastened. These nets are wide enough to be half a foot above the water at high tide.

The piles and nets form a wall against the sea, and as the fish swim up or down stream they find this obstruction to their course. Fish never turn backward, and, true to their instinct, they swim along the line of hedging, trying to find an outlet. At the deep-water end of the hedging is a netting, strong and heavily tarred, which is funnel-shaped, the small end inviting the fish to enter. The confiding fish does so, and finds himself in a square room with walls of netting. The fishermen come in their boats at ebb-tide, and carefully lifting the net, empty all the unlucky fishes into the boat.

This room is the fisher's weir, or pound, and is from fourteen to twenty feet square and from twelve to eighteen feet deep, varying with the depth of the water. The weir is provided with a rope, by which the men draw the net up till the fish are all in a small space, and then scoop them out with a hand-net. Fish of all sorts, herring, catfish, bass or rock, white and yellow perch, eels and the like are caught in this way. Herrings, which come in large schools, are caught in great numbers. Sometimes five hundred or more are scooped in ; but one hundred is thought a big haul of shad.

Shad are the most valuable and salable, and another method is devised for catching them. Large nets, fourteen feet long and thirty-six feet deep, are made of fine gilling-twine. These nets are hung at each end by wooden rings to poles, which are staked out at quite a distance from the shore. They are weighted by iron rings and hang down into the water like a sheet upon a clothes-line. The shad go up the river with the flood-tide, and at ebb-tide they are found

caught by the gills in this fine net. It is certainly not flattering to finny instincts that a slender net should hold fast such heavy, powerful fish. The fish are gathered in once or twice a day, and then are packed in barrels and boxes to ship to city markets.

Strange enough, there are plenty of men who do not consider the fish the property of the fishing-farmers, even when in the weirs, and constant watching alone keeps them from being plundered. The farmers have built little houses along the shore, where their men can sleep nights and keep one eye upon their nets. The only thing that holds these thieves within bounds is a gun loaded with buckshot.

After the fishing season closes the farmer turns his attention to crabbing, though not so extensively. The soft-shelled crab is quite scarce, but he is the same crustacean as the hard-shelled, the only difference being that his shell is soft during the time he is shedding the old one and growing a new one. The fisherman rows along the shallow water and scoops them up with a hand-net. A trap is made for the hard-shelled crab. Poles are driven into the water and connected by strong cords. To these cords other cords, baited with meat, are tied and let down into the water. The crabs come to feed on the meat, and are easily caught in hand-nets.

Terrapin, once so plentiful, are growing fewer and fewer. Some effort has been made to propagate them, but it is difficult and is not generally attempted. Oyster-raising, except for private use, is not attempted by the farmers. To supply the family table, small beds are planted and cared for and gathered by tonging.

AGNES BAILEY ORMSBEE.

How Milk is Marketed.

When the milkman rattles at the alley gate, or the front doorbell tinkles to his early pull on a winter's morning, how many know where the fluid comes from that is carefully ladled from the can into the answering pitcher, or know the system of production and transportation by which it reaches its destination at thousands of houses so regularly and promptly every morning in the year?

There are places in other countries than America where the milkmen drive their cows from door to door, to serve milk fresh and warm wherever needed; but such a method is far too primitive for our large cities and go-ahead people.

It would take a good-sized drove of cows to supply the milk that is consumed in one of the large city hotels, and most of the residence streets of our towns would have a double row of cows and milkers from one end to the other more than half the day, if such were the custom here. Other means have had to be devised to supply the people of our cities with milk.

Winter, when the fields are covered with snow or brown from frost-nippings, is the best time in which to visit a farm where cows are kept for the purpose of supplying milk to cities. Then all the resources of the dairy farmer are brought to bear in order properly to care for his herd, and secure its best yield for market.

When the country is green, when clover grows in inviting clusters, when timothy stands in lustrous tufts, and the green grass mats its tender shoots of which the milking herds may eat their fill, then Nature is doing by far the greater half of the farmer's work. Each cow then feeds herself, attends to her own sleeping arrangements, and makes her own bed.

One winter's day found me forty miles from Philadelphia, driving with a dairy farmer from the railroad station to his home. Nestled against a hillside, his house, with massive

chimneys and broad porches, had an old-fashioned air of solid comfort.

It was near the evening milking-time when we stepped from under the sleigh-robes to the swept path at the house-yard gate; so at my friend's suggestion we went directly to the barn to witness the operation. The girls, a rosy, laughing party of them, were selecting their milking-buckets, clean and

Milking in Summer.

bright as new pins, from the milk-room shelves, or their milking-stools from the rack outside.

Equipped with these, they entered the wide door of the main barn to pass in the rear of twenty-five or thirty cows, chained by the neck to their feed-bins. The pleasant odor of kine blended with the sweet perfume of hay and ground corn upon which the animals were feeding. Fat, sleek, well-fed creatures they were, clean and warmly bedded with bright straw; for the yield of a dairy is largely increased by liberal feeding and constant care of the cows.

Each girl had her allotment of cows, and for the time

assumed absolute control over them. Chubby Gertie, bucket and stool in hand, stepped bravely up on the right of a great red beast, ten times as big as herself, gave her an admonishing poke with the stool-legs, and said, authoritatively, "Stand over, Reddy!" which Reddy immediately did without protest.

Down the girl plumped upon her stool, gave her skirts a quick tuck under herself, nestled her bucket with a slant in the straw, rested her head against the cow's soft flank, and went earnestly to work with both hands at the round, full udder, causing its contents to dash in rhythmic spurts into the sounding bucket.

As the milking-buckets are filled, they are emptied into others much larger, having broad, lip-like spouts and partly covered tops, called strainers. These, when filled, are carried by men to the cooling-room, where the warm, frothy milk is carefully poured through the fine wire strainers guarding the spout, into cans made of heavy tin and bound substantially with either iron or brass bands.

The cans are about two and a half feet high, with wide mouths into which a handled lid fits tightly. They are of two sizes, holding, respectively, twenty and forty quarts. It is in these cans that the milk is shipped to its destination.

Cleanliness and proper cooling are necessities in handling milk. Everything that it touches must be scrupulously cleaned and scalded, and the spring-house or the cooling-room must be pure and well ventilated; if not, sour or distasteful milk is the consequence of the neglect.

As the cans are filled, they are placed side by side in the running water of the cooling-trough, which is of about the same depth as the milk in the cans. The milk is frequently stirred with a wooden paddle until all of the animal heat has departed from it, and here it remains uncovered during the night.

In some places more remote from the city the milk is sent to the railroad as soon as it is cooled, together with the morning's milking, to meet the late evening train; but our

farmer rises while it is yet night to hurry off his product to the early milk-train.

Four o'clock in the morning! The milk-cans have been loaded into the bed of the sled, and the horses are impatient to be off. Not a ray of light yet appears in the east, and overhead the bright stars are shining. The horses' feet creak as they tread the snow and the sled-runners sing as they glide over it. We are not alone. As we near the station, sleds driven by fur-capped, muffled drivers join us, coming from all directions, some from five or six miles away.

At the railroad station the sled halts by the edge of a

The Station, Philadelphia.

wooden platform at the steel track's side, whose floor is on a level with the car doors. Here is a busy scene. The station agent's calls of "Name?" "How many cans?" "How many quarts?" rise above the jingle of sleigh-bells as he stands with lantern on his arm, noting the names and amount brought by each person.

When the cans have been unloaded from the sleds upon the platform, and registered by the agent, they become in a sense passengers, and the agent proceeds to collect tickets for them. Drawing off their mittens, which they hold in their teeth, the drivers fumble in their pockets until a package of tickets is

found. From these each one selects as many tickets as he has twenty-quart cans, or two for each forty-quart, and hands them to the agent.

These tickets represent the passage-money for the cans. In this respect the tin reservoirs are treated precisely as human passengers.

There is a shout: "Here comes the train!" As it glides to the platform, the driver whose morning turn it is to load the milk, seizes a can and whirls it on its bottom edge to the waiting train official; he in turn grasps it, and keeps it whirling across the car until it settles with a thud among a group of every-morning companions from more distant stations. When all the cans are loaded and the passengers are on board, there is a wild wave of a lantern, a shriek of the locomotive's whistle, and on goes the train with its precious burden of life and life-giving fluid.

At every village, cross-road and station similar scenes are enacted, until one, two or three cars are filled with their tin passengers. Before half of the people of the city are out of their warm beds, the train glides into the station. Outside of it are double rows of milk-wagons, gaudily painted, and lettered "Pure Country Milk," "Diamond Spring Dairy," or some other seductive title chosen by the milkman to attract customers.

A railroad official examines the tags on the cans, and delivers to each milkman those marked with his name. The milkman hurries off with them to his wagon, unblankets his horse, climbs to his seat, tucks the blanket about his legs, and away he goes to rattle the alley gates or tinkle the front door-bells along the route he serves.

CHARLES McILVAINE.

The Statue of Liberty.

The entrance to New York harbor is adorned with the largest statue the world has ever seen. But the idea of thus marking the mouth of a seaport is not new. A statue which may be reasonably compared with Liberty Enlightening the World was erected more than two thousand years ago.

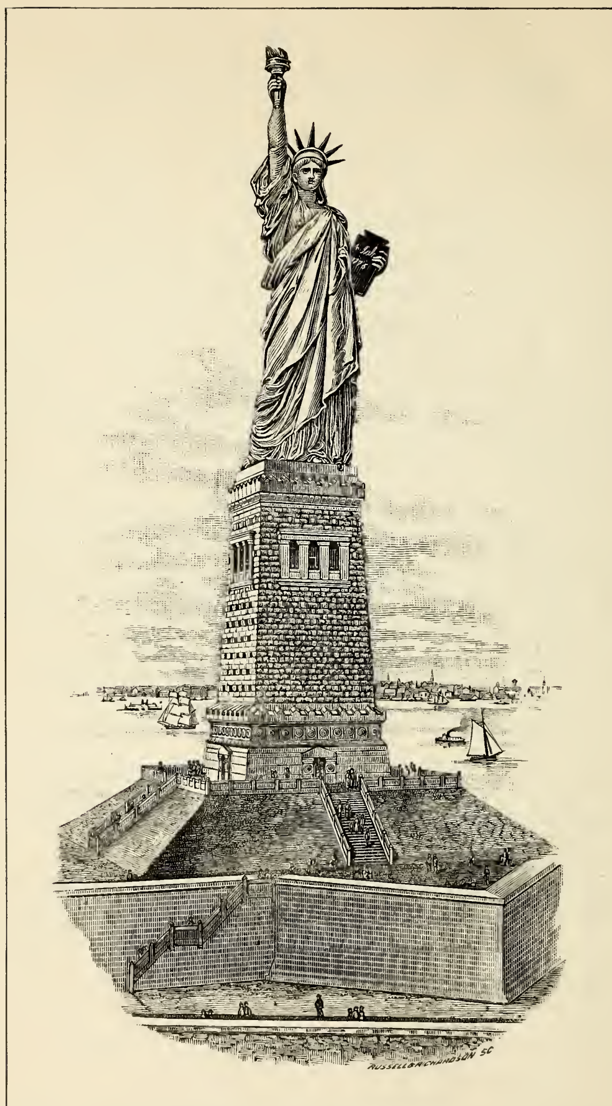
The Colossus of Rhodes was one of the seven wonders of the world. It was twelve years in building and was two-thirds as tall as the Liberty Statue. About 224 B. C. it was thrown down by an earthquake after it had excited the admiration of travellers for only about sixty years.

Engineering science is much farther advanced now than it was two thousand years ago, and it is the opinion of men competent to decide the point, that our statue will be able to withstand the fiercest gales that rage. Certainly extraordinary care was taken to make the foundation upon which it stands strong enough to endure forever.

This statue is the gift of Frenchmen to America. The money to pay for it was contributed in large and small sums by French people of every social standing. The statue itself is one hundred and fifty-one feet high, but the pedestal on which it stands is so great a structure that the statue towers more than three hundred feet from the ground. It is visible twenty-five miles at sea.

During the progress of the work in Paris, thousands upon thousands of interested men and women visited the shops where the statue was building. The French are a very impressionable people, and one who has ever seen a group of them under political excitement can easily see the manner in which they would shout, with nervous enthusiasm, "*Vive la Republique Americaine!*"

A description of the process of building the statue, for it was really built up with copper plates, is extremely interesting.



The Statue of Liberty.

First, the artist Bartholdi made a life-size statue. Next, each part was taken by itself, and multiplied in size according to a definite rule.

Then a framework of wood was built as a sort of mold, and the plates, nearly an inch thick, were fitted to it. Finally all the parts were joined together. But before the statue was shipped to this country it was all taken apart, and was transferred to New York in more than three hundred pieces.

Some of the measurements are astonishing. Ten men can stand with comfort inside the torch which Liberty holds aloft with a right arm forty-two feet long. Forty men can stand within the head, which they reach by a spiral staircase within the structure.

The statue stands in New York Bay, but it is an object of pride to every American, both as a compliment paid to the greatest republic in the world by the greatest of European republics, and as a conspicuous emblem of our proud but true boast that here the torch of liberty has burned with the brightest and steadiest flame.

Moreover, the statue was not presented to New York City, or to the state, or to the national government, but to the American people, and while there are good reasons why New Yorkers should be specially interested, it is difficult to see how any true American can be indifferent.

The statue is the gift from one people to another; from Frenchmen, who love liberty, to Americans who love it no less, although it may be true that the methods by which the French sought to win liberty are not ours, and that they do not recommend themselves in all respects to men who love law as well as liberty.

Some men, also, will be disposed to admit that a colossal statue standing on an island in a harbor is not the highest form of art. But what of it? Let us look to the spirit of the givers, and the grandeur of the gift.

MAX OWEN.

Brooklyn Bridge from the New York side.

The Brooklyn Bridge.

In every bird's-eye view of Greater New York the Brooklyn Bridge must always be a prominent object. Its two magnificent towers rising from the water's edge on both shores loom up in the outlook from every eminence in the neighborhood.

Seen from the base, they rise toward the sky with a solid and indestructible splendor, and from the river they lose nothing of their superb height, while the bridge itself, hung from shore to shore with unparalleled boldness, is more fully revealed here than at any other point.

No general view, however, can show the scope of the entire work. The long span may be depicted, for it is high above all the surrounding objects, but one must be on the bridge itself to see what a wonder of engineering it is. It is not merely a suspension bridge across a wide and deep tidal river, but by means of enormous masonry arches it is continued high over the housetops, until at one end it reaches the level of City Hall Park, in the centre of commercial New York, and at the other end the heart of Brooklyn.

It not merely bridged the East River, but it practically made one city of two which hitherto were connected only by tedious ferries, which at the best were always liable to the delays of fog and ice. The bridge opened an ample and direct path by which one can accomplish in five minutes what formerly took thirty minutes, and therein the utility of the work is shown.

It is not simply a footway for pedestrians. It is eighty-five feet wide and is divided into five parallel avenues, two for railway tracks, two for carriages and other vehicles drawn by horses, and one for pedestrians. The latter is much higher than all the others, and gives to foot-passengers an uninterrupted view over the roofs of the cars which run on both sides

of it, a view so comprehensive and impressive that the footway is a favorite resort to sightseers.

The entrance to the bridge is a rather small structure, opposite the City Hall, and is dwarfed by the much finer buildings surrounding it. Passing out of the station one walks on a masonry viaduct which becomes higher and higher as the land over which it is built slopes down to the river. Now the observer is on a level with the top-story windows of the houses, now above their chimneys, and now marching directly over the tracks and trains of the elevated railway. With each step taken along the smooth path, the men and women in the streets below grow more like pigmies, and a desert of roofs, with wreaths of steam and smoke issuing from the chimneys, spreads out in all directions.

By and by the end of the viaduct is reached and we enter upon the bridge itself. The massive cables by which it is suspended sweep up in front of us and pass over the top of the New York tower, from which they sweep down again with an exquisite curve to the very middle of the bridge, thence up over the top of the Brooklyn tower and down to the anchorage on that side of the river.

Now we are high above the ships lying at their wharves and we can see them from stem to stern. In a few seconds more we are walking under the archway of the New York tower, and the splendor of the work touches us with increasing awe. The bridge hangs across the river without other support than the cables for a distance of sixteen hundred feet; the floor is one hundred and thirty-five feet above high water, and the tower rises two hundred and seventy-seven feet above the level of the shore, or as high as the dome of the Capitol at Washington.

The real size of the tower cannot be seen, however, for from the sea-level it is built down out of sight under the rushing water to its foundations on the bed-rock seventy-eight feet below the surface, and thus from top to bottom it is actually three hundred and fifty-five feet high.

Advancing to the middle of the span we look down again. Two cities with two million people are below us, and the eye can pick out every notable building. Looking straight down, the great Sound steamers and large ships can be seen passing under our very feet, for we are higher than their topmasts, and it seems as if we had acquired the power of wings and

Railway and Driveway, South side.

were poised somewhere up in the sky. The harbor is visible down beyond the Statue of Liberty, and the ocean steamers are pouring endless ribbons of smoke toward the Narrows. We can see the fortifications, the low shores of New Jersey, with the purple band of the Orange Mountains in the distance, and the blue, curving hills of Staten Island.

Constant trains of cars are passing over it, and the carriage-ways on both sides are filled with a stream of trucks, wagons

and coaches. At night hundreds of electric lights sparkle along the bridge, and to the mariner coming into harbor through the Narrows, they appear to be some new and brilliant constellation in the sky. Passing under the arches of the Brooklyn tower, over which the vast supporting cables are again carried, we reach the Brooklyn end of the bridge, a little over a mile from the point at which we started.

The work on the bridge was begun in 1870, and day by day passengers by the ferry saw the towers growing in height, until in 1876 both of them were complete, though there was as yet no connecting link between them. How could the first wire be stretched across the water?

Traffic in the river was stopped for an hour, until a scow could carry a wire rope from one tower to the other and back again, so as to form an endless belt running from anchorage to anchorage. A board seat slung by its four corners to this belt and passing over it, was used in the preliminary stages by the workmen for uniting other wires to the original one. By slow degrees wire was spliced to wire and multiplied until, after seven years of work, the splendid suspension bridge was completed.

Each of the four enormous cables which sustain the bridge contains five thousand wires one-eighth of an inch in thickness. They all rest upon the tops of the towers, without dragging upon them, and thence they are carried to anchorages nine hundred and thirty feet inshore from the towers, where they are secured under a weight of about sixty thousand tons of masonry.

Everything about the Brooklyn bridge is substantial, as indeed it ought to be, for the work cost nearly sixteen million dollars. The superstructure is calculated to last for a century at least, and the imagination cannot compass the distance of the future when the towers shall have fallen.

WILLIAM H. RIDEING.

The Grant Monument.

The formal national crowning of the career of General Grant occurred in 1897, when his grand tomb at Riverside Park, New York, was dedicated. The ceremony was as impressive as befitted the occasion, and is not unlikely to be remembered as the culminating incident of the great Civil War period of our national history.

Napoleon Bonaparte's mortal remains, lying in the magnificent marble crypt beneath the golden dome of the Hôtel des Invalides in Paris, have hitherto been more grandly entombed than those of any man of modern times. This distinction is henceforth to be shared by the relics of our patriot warrior whose humanity was signalized by his famous words, "Let us have Peace."

These benign words of the man who, though bred to arms and preëminent in war, never forgot the gentle instincts of a Christian, have perhaps more endeared General Grant to the American people than all his victories. It is eminently appropriate, therefore, that the inscription, "Let us have Peace," should be most conspicuous on the hero's mausoleum as proclaiming for all time to our people, and especially to our military leaders, that the one justification for war arises when no other means can secure an honorable peace.

The history of the Grant Monument is well known. As soon as it was determined that the General's tomb should be in New York, the Monument Association opened its books for popular contributions. Owing to various difficulties, the undertaking made little progress until 1892, when Gen. Horace Porter assumed charge of the work. His prestige as a soldier, his long service on General Grant's staff during the Civil War, and his close friendship with the great leader made him thoroughly acceptable to the nation as the directing mind of the enterprise. Money immediately began to accumulate.

Eighty thousand persons contributed sums averaging seven dollars and fifty cents each, or in all about six hundred thousand dollars.

No finer location for such a monument could have been selected. It stands at the northerly end of the high ridge, in the loop of the Riverside driveway, just at the point where two noble views are obtained, northward up the Hudson River past the Palisades, and southward down the harbor.

The monument itself is so original, so unique in design as to startle the beholder at first sight; but after the first impression has passed, the grave and noble simplicity of the architectural conception commends it to the soul. It dignifies the fame of American art, for the designer was our countryman, Mr. John H. Duncan.

General Grant's Tomb.

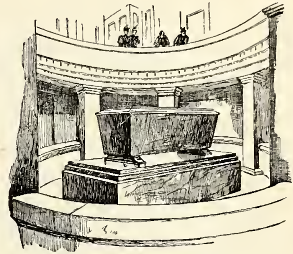
The structure consists of a huge square erection of smooth white granite, surmounted centrally by a capped dome encircled by columns. All four sides are alike except the south, where there is an entrance portico, with a double row of granite pillars, over which is inscribed, "Let us have Peace."

Even granite is susceptible to erosion by the elements. Consequently the best possible quality of stone was sought. Specimens from the quarries of New York, Michigan, Pennsylvania, Virginia and Rhode Island were tested by the committee and found unsatisfactory. At length a very superior granite was discovered far in the interior of the State of Maine.

This stone is very light in color, so nearly white, indeed, as

to resemble marble, and be mistaken for it at a little distance. It is quite without blemish or cleavage sheen, and experts believe it will resist the action of climate for many centuries. The cost for transportation, labor and special machinery for working it was very great.

Internally, the monument is occupied entirely by the memorial hall and central pit, or crypt, at the bottom of which stands the great granite sarcophagus containing the coffin. One looks down upon it from the main floor through a circular opening eighteen feet in diameter, surrounded by a heavy, handsomely wrought rail.



The Sarcophagus.

The sarcophagus itself is cut from a single block of stone, and weighs about five tons. It rests upon a low pedestal, or support, of Quincy granite. The crypt is about fifteen feet in depth below the floor of the hall; on either side are recesses for military emblems or busts, as at the tomb of Napoleon.

The ceiling of the memorial hall consists of four grand arches springing from the four sides of the edifice and of the interior of the dome, the central point of which is a hundred and sixty-five feet above the floor. There are no columns of support here; the entire weight of the dome rests on the four great corner piers of the structure, which contain staircases by which visitors may ascend to the circular gallery about the dome, a hundred feet or more above the floor of the hall.

The interior work is of marble, both Italian and American, but has been kept austerely plain and free of ornamentation. Two of the corner piers were built to contain cases in which to show the swords, medals and other war relics of General Grant.

C. A. Stephens.

Elevated Railroads.

For a great many years the city of New York was hindered from making its natural growth by the lack of means of getting quickly from one part of it to another.

Manhattan Island is long and narrow, and the lower end is wholly given up to business. A ride from two to six miles every morning and evening in a slowly moving street-car takes too much valuable time, and is very uncomfortable, owing to the crowds travelling at the beginning and end of each business day.

There were only three ways to remedy the evil. Horse-power had to be given up, and steam or electricity used with fast trains on a surface railroad, or above or below the surface. The dangers of a surface road would be so great and its interference with business so annoying that it was never seriously considered. The great objection to an underground road was its excessive cost.

The elevated road was unpopular at first. An experimental section was built, which was afterward extended, so that for two or three years there was in operation a railroad on stilts, running from the Battery, at the lower end of the city, to Central Park, a distance of about five miles.

After years of contest for right of way and popular approval, a system of elevated railways was completed, consisting of four lines. They start from the Battery with one double track road on each side of the city, then each separating, the two eastern lines run to the Harlem River, and of the western roads one ends at Central Park and the other far up at 155th Street.

The increasing popularity of these elevated roads, and the rapid rise in prices of land in the upper part of New York, as block after block of dwellings was erected, naturally influenced real estate men in Brooklyn to build rapid transit roads to the outlying districts of that great city.

The completion of the Brooklyn Bridge removed the risk of delays by the ferries, and insured a quick passage from New York City Hall to the great region of homes across East River, by the lines of elevated road that start near the Brooklyn end of the bridge and connect with other roads that run to all parts of the city and its suburbs.

In some streets the railroad is supported by a single line of

COPYRIGHT, 1895. LOEFFLER, S. I., N. Y.

Elevated Road in the Bowery.

pillars standing at the edge of the sidewalk, so that the trains run on each side of the street. In other streets the tracks rest on double rows of pillars connected by iron girders. The pillars rise from the sidewalks in narrow streets, and in some places from the central part of the wide avenues.

The one-legged system, as it is called, looks insecure ; but

competent engineers say it is perfectly safe, and that there is more danger from straining the works in the direction of the road, when trains are started or stopped, than there is from giving way in the direction across the track.

The stations are reached by long flights of steps, as the road runs along on a level with the second-story windows, or higher. Those who are observant will notice that the rails rest on sleepers placed more closely together than on a surface railroad, that the rails are more solidly spiked down, and that there is a guard inside each rail, along its whole length, to prevent cars or engines from running off the track. The fare is the same for any distance, five cents. The stations are about half a mile apart, or less, and the trains do not stop except at the stations.

A ride on the elevated railroad is a pleasant trip. It gives a curious sensation at first to be whirled along over the sidewalk, so near to the second-story windows of tenement-houses that you could see what the families living there had on the table for breakfast, if the cars did not go so fast; to look down upon the heavy teams jogging along in the street, or to watch the train as it runs upon a sharp curve.

Those who travel every day soon get accustomed to the strangeness of the trip, and think no more of it than farmers' boys think of a ride in a hay-cart. They run up the long stairway, fling down a nickel and snatch the ticket, which they drop into the box as they rush to the cars. They quietly read their daily paper till they have almost reached their destination, when they push to the doorway, ready to step off as soon as the guard opens the gates.

These roads are a great blessing to New York, because they enable people to live farther away from the centre of the city, and therefore more cheaply, and yet lose but little time in travelling. They add immensely to the opportunities of New York City for growing in business and wealth.

MAX OWEN.

THE COMPANION SERIES

Preserves in permanent form some of the most valuable and interesting articles of the eminent authors who have written for The Youth's Companion. These Books are appropriate for Libraries, both private and public, and for use in Schools.

Each volume contains two hundred and fifty-six pages, is illustrated by The Companion's best Artists, is bound in strong linen, and contains four volumes of The Companion Library described on the inside cover at the beginning of this book. The Series comprises the following volumes:

By Land and Sea. A Book of Travel and Research.
Containing The Companion Library Nos. 2, 3, 4 and 5.

Talks About Animals. A Book of Natural History.
Containing The Companion Library Nos. 6, 7, 8 and 9.

Our Country: West. The Newer Portions of the United States.
Containing The Companion Library Nos. 10, 11, 12 and 13.

Our Country: East. The Earliest-Settled Regions of America.
Containing The Companion Library Nos. 14, 15, 16 and 17.

Price 50 Cents, Sent Prepaid.

PERRY MASON & COMPANY, Publishers,

201 Columbus Avenue. BOSTON, MASS.

The Youth's Companion

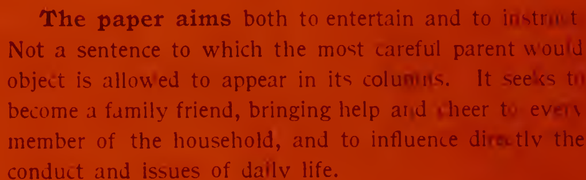
is an Illustrated Family Paper. It is published weekly. Its illustrations are by the best artists.

Its stories represent real life and aim to interest readers of all ages. They are stimulating, healthful and helpful, but never sensational. Their great number and variety, together with their marked excellence, give The Companion acknowledged preëminence among literary publications.

Its miscellaneous articles are read by young and old with equal eagerness. Its letters of travel present the picturesque features of foreign life. Its articles on health and etiquette are of real practical value.

No man or woman, however intelligent, can fail to find in its editorials upon current topics facts that are not ordinarily found in other papers, and that it is a pleasure and a benefit to know. Young people, especially, should possess the information they give.

Its biographical and historical articles are very valuable to those who appreciate the elements of progress. Successful men and women in many branches of business and professional life give their experiences to the readers of The Companion.



The paper aims both to entertain and to instruct. Not a sentence to which the most careful parent would object is allowed to appear in its columns. It seeks to become a family friend, bringing help and cheer to every member of the household, and to influence directly the conduct and issues of daily life.