THE MANCHESTER SHIP CANAL

ONE OF THE GREAT TRADE ROUTES OF THE AMERICAN INVASION

MANCHESTER, England, July 15.—(Special correspondence.)—I have come here to give you the latest and newest information about the Manchester ship canal. It is rumored that J. Pierpont Morgan and his associates have bought a controlling interest in it, and that they will shortly put on a new line of steamers to trade between Manchester and the United States. There is no doubt but that Morgan's London bank owns a large amount of the shares. It took them when the canal was begun and has held them ever since. If these rumors are correct the canal will soon be the chief route for the entrance of our goods into this busiest part of the United Kingdom, and Manchester will become a headquarters of the American invasion. Indeed, the city already receives steamers from New York, Philadelphia, Baltimore, Galveston and New Orleans. Hundreds of thousands of cotton bales from our Southern States are here brought via the canal, to be transferred to the mills; an enormous grain elevator has sprung up for the storage of American wheat, and I find that the warehouses along the Manchester docks are already filled with all sorts of American goods.

The Seaport of England's Heart.

But first let me tell you something about this great port, which the English have created in the very heart of their country. Manchester is far back from the sea. It is one of the busiest cities of the world, and the country surrounding it is a vast beehive of work. In passing over the railroads to and from it in every direction you ride through groves of smokestacks, and it is impossible to get away from the dense smoke which pours forth from the foundries, factories and mills which dot the landscape.

Including its sister city, Salford, the place has now about 800,000 population, and the manufacturing towns nearby are so close together that 2,000,000 people live within carting distance of the Manchester docks. This means that goods brought here on the canal can be carried by horses to the homes and factories of these 2,000,000 people.

Nearby are other industrial centers which make all sorts of products for home trade and export. Sheffield, with its cutlery, gunworks and furnaces for making iron and steel, is but an hour away by train, and the woolen center of Leeds is almost as near. Altogether Manchester forms the nearest port for a population of about 8,000,000, and its people estimate that they can land ordinary goods by means of their canal at a saving of $1 per ton on the inland transport over the same goods landed at Liverpool. The canal people have prepared estimates of the actual cost of distributing goods throughout this part of England, and it will pay American shippers to investigate the advantages of sending their exports by the canal almost direct to the factories.

Manchester's Mighty Waterway.

I have spent some days in going over the canal and in looking through the vast warehouses and buildings which have grown up about it. It is one of the wonders of modern engineering, and as a long-time investment it will probably be a success, although the present generation and perhaps the next cannot expect to have dividends out of it. The cost of the undertaking has been enormous. At the start it was thought that the canal could be constructed for $40,000,000, but when completed it was found to have cost $75,000,000. Before it was built Manchester was on the down grade. Its factories and warehouses were failing, and some of the greatest of its industrial institutions were transferring their plants and business to Glasgow, where they could have better shipping facilities. Liverpool was steadily gaining, and Manchester steadily declining, the former city charged what tolls it pleased on goods passing through to the Manchester region, and the railroads collected enormous freight rates.

How the Canal Was Built.

As a result the Manchester manufacturers saw ruin staring them in the face. They came together, planned this ship canal, and raised the money to build it. They got the city corporation of Manchester to back them to the extent of $25,000,000; they put their hands into their own pockets and gave millions more, and within a short time they had an army of laborers at work larger than that which Xenophon led on his march to the sea. When in full swing their army consisted of 17,000 men, divided into eight companies, officered by picked experts, each digging at a section about four miles in length. This army had its camps in each section. Its tents were wooden houses, made from lumber brought from the United States, and as many of the workmen had their wives and families, there was a busy town along the whole line of the canal.

No one can appreciate the extent of the work without going over the canal. It is 35½ miles long, 26 feet deep, and at the bottom 120 feet wide. If you can imagine a cellar so deep that you could drop a two-story house within it and have the roof below the surface, so wide that the average city lot could be laid out crosswise across the bottom, and so long that it would take a railroad train at a good speed an hour to run from one end of it to the other, you may have some idea of this enormous ditch which the Manchester people have dug from their city to the sea. A part of the canal was along the course of the little River Irwell, but much of it had to be dug out of the solid rock. The excavation necessary was half as great as that required for the Suez Canal, and most of it much more difficult. Eight miles of embankment and sea walls had to be erected along the foreshore of the Mersey, and upon the whole canal 70,000,000 bricks and 220,000,000 cubic yards of masonry were constructed.

Five sets of locks were put in, each big enough to admit an Atlantic liner, and these, by means of great steel sluice gates, raise and lower the ships to the height or depth of 60 feet. There are, in short, from Manchester to the sea, five mighty steps, each 12 feet high, which the ships have to climb in coming up the canal.

The Manchester Docks.

I was surprised at the extent of the Manchester docks. It seems strange to see all the surroundings of one of the largest seaports right in the heart of a rich manufacturing and agricultural country. The docks are vats of water walled with masonry, and surrounded with great warehouses, which are equipped with the finest of modern machinery. The water space within them covers 256 acres, and the total length of the quays about them is more than 5 miles. In one of the docks three Atlantic liners have been berthed simultaneously at the same quay, and during my visit yesterday I saw a ship from Bombay, one from Australia and one from Galveston loading and unloading goods almost side by side. Along the docks railways run, and the company has 100 miles of track connected with the canal, and there are more than 40 trains daily, carrying goods in and out the docks.

It was in the canal company's steam launch that I was taken from dock to dock, and from warehouse to warehouse, and it was with a canal officer that I later on took a trip down the canal from Manchester to the sea on the "Duke of Leinster," bound for Ireland. Our captain of the Leinster was a jolly old sea dog who trembled like a leaf as we were photographed standing on deck going down the canal.

I am surprised at the traffic which this port already has with the United States. In every warehouse I found American goods, and in one especially, known as the New York warehouse, I saw thousands of bales of cotton, which had just come from Galveston, great boxes of machinery for the Westinghouse electric works, crates of American desks and great cases of hams, bacon and lard. On the top of another warehouse, four stories high, I took photographs of a thousand odd barrels of resin which had just come from the pine lands of Georgia and South Carolina, and at the grain elevator I saw a ship unloading wheat from Philadelphia.

This elevator is of American construction, having been built by Messrs. John S. Metcalf & Co., of Chicago. It has a storage capacity of 40,000 tons of grain, or 1,500,000 bushels of wheat, and in it there are 226 bins or pits, the largest of which holds as much as 300 tons. The elevator is right on the canal, and the grain is taken directly from the ship through a marine leg, which works by revolving buckets on an endless chain, lifts the grain up into a tower by the boat and drops it upon a wide india-rubber belt, which carries it into the elevator and up into the bins. There are also pipes which do the same work by means of suction, so that a shipload of wheat can be discharged within a few hours. The machinery will take 500 tons from the steamer hold into the elevator in one hour. It weighs the grain at the water's edge, and later on weighs it again when it is in the sacks ready to be loaded upon the carts or barges by which it is taken over the country.

During my visit to the elevator, and, indeed, throughout the trip, I was accompanied by Mr. A. Joynson, of the Manchester Canal Company. He tells me that the grain imports have steadily increased since this elevator was finished, and that they now amount to about 150,000 tons annually. During the first six months of this year 85,000 tons of grain have been received into the elevator, and the most of this came from the United States.

He tells me that the shipping from the United States is steadily increasing. Regular steamers have been run here for years from New York, Savannah, New Orleans and Galveston, and there have been occasional sailings from Baltimore, Newport News, Charleston, Brunswick, Mobile and Pensacola. Cattle are now brought here from Philadelphia, and in the near future there will be a direct steamship line from Chicago to Manchester by way of the St. Lawrence, the Welland Canal and the Great Lakes. These ships will bring cargoes of lumber and provisions, and a regular service will probably be maintained.

Canada and the West Indies.

Canada already has a line of large steamers to Manchester, which make regular trips during the Summer. These ships bring both lumber and cattle. Some of them are of over 8,000 tons, having accommodation for 700 live beeves.

There is a good prospect for a fruit trade between Manchester and the West Indies. Within the last few months bananas have been brought here from Jamaica and a regular banana service is to be instituted which will supply the Midlands with this fruit, and this service may in the future be extended to Porto Rico and Cuba. The fruit companies here have bought three steamers from the Chesapeake & Ohio Railway Company and will run them to Jamaica. Each boat will bring 40,000 bunches of bananas.

Among the recent arrivals are two ships from the Black Sea with 7000 tons of Indian corn, the sailing vessel Miltiades from San Francisco with 11,000 quarters of barley and wheat and Clampa of Tacoma with 2500 tons of wheat from our great Northwest.

The traffic of the canal is steadily growing. Within the last six months the revenue has increased to the amount of $125,000, and there has been a steady growth in the business since the beginning. The traffic of the present year will probably exceed 3,000,000 tons and will be greater than that of any year of the past.

In my ride up the canal I passed cotton ships from America and from Egypt. The American imports up to the middle of last April were almost 400,000 bales and the Egyptian about one-fourth that number. At the lumber docks I saw a ship from Mobile unloading a cargo of pitch-pine, and at the same wharf was one similarly loaded from Pensacola. There were great tank steamers from the Russian oil-fields at the Russian oil tanks on the right bank of the canal, and on the left other tank steamers discharging American petroleum. I passed the freezing works where the New Zealand ships land their frozen mutton in my sail on the Duke of Leinster and also the great cattle sheds and abattoirs belonging to the Manchester corporation, of which I may speak further in another letter.

Some Wonders of the Canal.

The ride down the canal was one of greatest interest. The canal company owns much of the land along the way, and this is of such a nature that there could be an almost continuos dock from one end of it to the other. Leaving Manchester you sail by the great warehouses and factories on the canal's bank. Now you are passing through fields as rich as any in old England. They are bounded by hedges and upon the green grass fat cattle are feeding. Cheshire county on your left is one of the richest dairy counties of the United Kingdom, and Lancashire on your right is the busiest manufacturing country of the whole world. We saw large manufacturing towns at every few miles and often passed other steamers coming up to the city. The locks were easily and quickly gone through; the sluice gates open and shut automatically and the steamer drops 12 feet within less than half as many minutes.

Curving Bridges.

We steamed under great railroad bridges so high above the canal that the masts of the ships do not touch them as they pass on below. These bridges were erected at an immense cost by the canal company. The railroad companies were opposed to the enterprise, as they thought it would cut down their traffic between Liverpool and Manchester, so they forced the canal people to not only build the bridges, but to raise the railroads for several miles on each side of the canal, so that the slope of the road crossing the canal might not be steep.

The most surprising bridge on the canal, however, is one where the Bridgewater canal crosses the Manchester ship canal. The Bridgewater canal has for years done a large business between Manchester and Liverpool. It was bought by the Manchester company at the time they began the ship canal, and it was then making a profit of something like $100,000 a year. It is still in use, and it carries considerable freight. The line of this canal was right across the route necessary to the Manchester ship canal, and at first it seemed as though the construction of the latter would necessitate its destruction.

This was objected to, and the engineers solved the problem by making a swinging aqueduct bridge at the crossing. This bridge can be closed with the water, and even with the boats in it, and by machinery so moved around to the side that the ships can pass through in the greater canal below. When they have passed the bridge moves back into place and the water flows on undisturbed. The aqueduct, with the water in it, weighs 1400 tons, and it is moved as easily as though it weighed less than 14 pounds. It can be swung in a couple of minutes so that the barges of the old canal are almost unhindered by the mighty ships of the new.

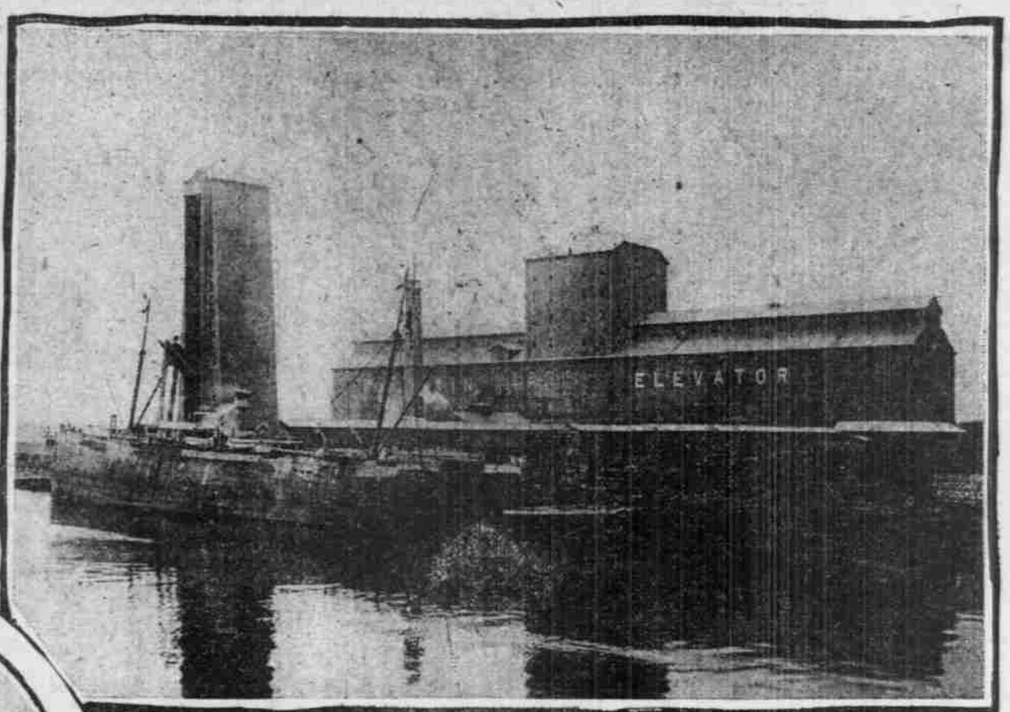
England's Big Canal System.

This Bridgewater canal is only one of a large numbesr of waterways which distribute freight to all parts of England. We are prone to look upon this as a railroad country. It is a canal country as well. The United Kingdom has altogether 2907 miles of canals, and of these about 3500 belong to England and Wales. More than one-third of the whole are the property of the railways, the others being managed by private corporations. Many of the canals are connected with London, one joins Liverpool and Birmingham, others tap the country about Leeds, and others are found in the district of Sheffield. Ireland has about 500 miles of canals, and Scotland 70 miles.

Upon these waterways about 40,000,000 tons of freight are annually carried at a cost of more than $10,000,000. They are said to pay with horses as their motive power, and it is now proposed to run them by electricity, and I understand that some of our American capitalists have been looking into this transformaton as a field for profitable investment.

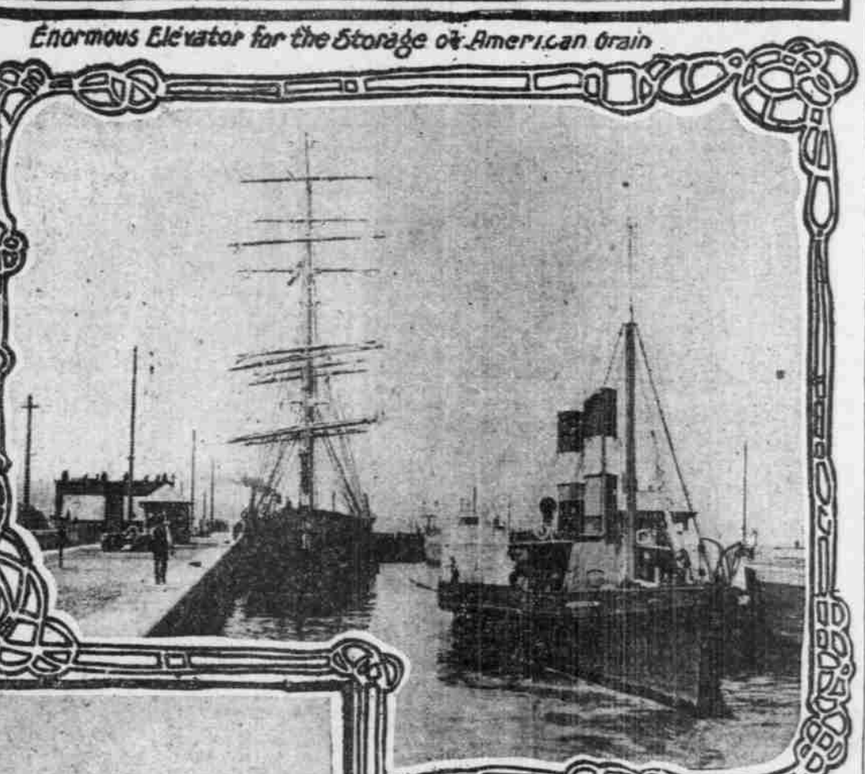
FRANK G. CARPENTER.

(Copyrighted, 1902.)



Enormous Elevator for the Storage of American Grain

On the Manchester Ship Canal.



Scene in One of the Locks of the Canal.

The Swinging Aqueduct of the Bridgewater Canal.

HIS LODE STAR

BY JOHN FLEMING WILSON

THE office of the Ocean Hotel at Seaside resounded with the irresponsible laughter of a crowd of young men. The testimony to the presence of wide-awake and joyous mankind echoed through the grove of stunted pine and overrode the drowsy snore of the surf breaking on the beach, deserted now and lying like a whitewashed deadline between the sentinel ocean and the land of an unruly people.

It was a Sunday night. The crowd of excursionists was gone; the booths that had lined every path with enticing wares were shuttered and only the remnants of feasts whose attendant laughter was vanished, the half-obliterated traces in the sand of feet that had wandered delightfully, and the little heaps that marked the fort, now abandoned, around which some childish conflict had raged, remained to bear glaring witness to the sky that before the shadow of night there had ebbed a boisterous human tide.

Along the beach a belated man was walking. His evening dress was so distinctly out of place in the seclusion of nature that he was consciously hastening his pace the sooner to merge himself with men.

As he hastened along over the sand he heard the laughter emanating from the Ocean Hotel. It awakened his spirits, which were uncomfortably dulled by the monotone of the surf and the windy solitude. His face, white and smooth, gave the impression of a hale and carefully tended old age. Though his step was hurried, there was no awkwardness or lack of strength; he moved as does a man who is still master of his limbs, and an observer might have watched a smile flush his clear cheeks into the reddiness of youth. The cause of this rejuvenescence of expression lay, not in the virginal freshness of his environment, but in the swift anticipation of being again the leader among a company. The young men's voices called to him to come and dominate their exuberance with his proficiency.

He turned into the grove and slackened his pace. The light from the open doorway accentuating his well-bred features, his quiet, almost noble carriage, the correctness of his demeanor, received him and framed him kindly.

When he stepped briskly among them the half-score of young fellows greeted him hilariously. He did not know the face of one of them, but the atmosphere was familiar, and he responded pleasantly. At the sound of his modulated tones a detached group broke from around an old man in the rough garb of a seafarer. His blinking eyes followed them as they quickly formed a circle about the newcomer.

"It's a late hour for an old gentleman to be out," said one with cheerful impudence.

The man smiled benignantly. "You college fellows think a man with gray hair is out of the world."

Two or three broke out into a murmur of appreciation. "So you recognize us college men at sight?" said one condescendingly.

"The earmarks are unmistakable, even to an untrained eye," he answered, unruffled.

"I wonder now," interposed another, "if you have as good an eye for cigars?"

The hint was smilingly accepted and a well-filled case produced. A little less boisterously the young fellows quizzed their new companion. They propounded riddles, to answer which meant the incurring of ridicule. They tenderly inquired about his lungs, playfully poked him in the stomach and rudely thumped him on the back to see if his heart was sound.

"You seem pretty fit for an old chap," was their conclusion. "Now have you got any good excuse for living?"

"What do you call a good excuse?" he demanded with perfect good-humor.

"Can you run a mile?"

"Can you jump a fence?"

"Do you like the girls?"

"Can you make your own living?"

Their questions rang out in challenge, and the elderly aristocrat met them fairly. His wit won their attention, and before they were aware of it he was cross-examining them. They found to their discomfiture that he was quite modern. Yet their pride would suffer them to make no admission except, "You must be a college man?"

"I am," he replied, kindling as old memories flooded over him. "And perhaps I've done more to earn the title than you youngsters."

There was silence and he went on, "I learned Greek when I was too poor to buy a book, and my teacher was poorer than myself. I remember how he would write out my lesson in the dust of the street, with his cane, and I learned it between the passings of teams. I don't believe I've evr quite mastered some things about Greek just because a team unluckily drove by and smudged it."

They gazed at the correctness of his attire, at the softness of his hands, at the straightness of his figure and kept respectfully silent. As he finished his recital a waggish youth tapped him on the shoulder. "That's good, sir; but what have you done since to justify Providence in keeping you alive? What great thing have you done? Speak up sir; this is your day of judgment." With a subtle vanity that only added value to his words he recited modestly but with well-turned phrases of experience his triumphs. They listened while he told them almost hesitatingly of successes in surgery, of lives saved, of benefits to the human race; wondering, as he obliterated each achievement in the shadow of a greater.

As he progressed a new auditor hovered on the outside of the circle. It was the weather-beaten, time-worn relic from the sea who had first engaged their jesting attention. As the quiet, humorous, well-told narrative flowed smoothly on, this ancient toiler fluttered voicelessly about, painfully strivin- to drag from the recesses of his own memory some deed of worth to match this triumphant justification of a life. But he achieved nothing but the amused glances of the speaker and his auditors.

"You've taught us a lesson, sir," said one of the young men, finally. "If we fellows can only do as well, we can die all right."

The sober tone demanded an antidote, and another turned to the tottering figure outside the close-drawn circle and cried. "It's up to you, daddy. What are you going to plead at the judgment seat?"

The old man turned bewildered eyes upon the kingly face of the coeval. He struggled to clutch and bring forward some deed that would be his justification in the humorously inquisitive eyes of these young men. His awkward thoughts ran on nights of peril in strange seas, on hours when he had driven back death. But he could find no plea there; he had done his duty; that was all. On his heaving breast lay a medal for saving of life. His hand closed on it with longing, but he felt its insufficiency.

Noting his troubled face the other held out a slim, smooth hand, and said reassuringly: "Honest toil has been your lot, my friend, and that's enough."

The dilapidated mariner shook his head. In the vista of his life surely he could discover some dominant thing that would stand unshaken even before the judgment seat. Time and again words bubbled to his lips, only to ebb away darkly.

The perspiration stood out thickly on his shriveled visage, and the young fellows laughed delightedly. "Come, old boy, speak up. What's your life been good for?"

The brutality of the question crushed all speech deep into a swelling breast. With the eyes of a hunted beast he strove to find some outward path, some warranty for his existence. To his shackled mind it seemed that this was an inquisition by his own soul and that the answer must be perfect and sufficient.

His despair was breeding an impotent hatred of the smiling face before him and its sleek hair. His own hands mocked him with their departed strength.

The penetrating query came again: "What's your plea, old man? What shall you say before the Judgment Seat?"

His quivering lips slackened and his deeply lined face withered. The man opposite him had lived in prosperity to justify himself with ease; he himself had lived by bitter effort to fail of any excuse.

The group, now frankly inquisitive and scenting a new and piquant jest, seemed smiling in derisive mockery upon him. And the old man's stubborn soul still fought stoutly. He knew his life had not been in vain. But what should he say? What was his salvation?

The old habit of the seafarer asserted itself. The other had sailed along the varied, populous coast of life, careless of compass, by the dead-reckoning of experience. But he, a mariner of the deep, unmarked ocean, had sailed in seas where the excellent sky shines in strange splendor or the dark tempest closes down bewilderingly. Though he could describe his course by no landmarks familiar and striking to the human eye, he was certain of his unswerving aim. And now he turned to that guide that had led him through his weary way. He knew his haven as the blind needle knows the pole.

In the glare of the hotel office he faced his judges triumphantly. The faded lips were firm and his voice carried a note of the echoing thunder of the shoreless main. He flung his justification before them and met the eyes of the other man of years in stern equality: "She loved me till she died."

SUMMER DOLLHOUSES.

Delightful Occupation for Little Girls During Vacation Days.

Summer days are ideal ones for dollhouses. Set in a cool spot under the trees, on days too warm to admit of active play, they make the happiest of all occupations for little girls. The Mothers' Journal tells how to make the prettiest kind of playhouses out of boxes. The boxes are open in front, of course. Tall boxes have a shelf half way up, dividing them into first and second stories, and then there are partitions through the center, making two rooms on each floor. A stairway leads from the first floor to the second; the walls are papered, the floors stained, rugs laid, and shades and lace curtains placed at the windows. The bedrooms have the neatest and whitest of beds, dressing tables, bureaus and washstands, with cretonne and muslin bureau scarf, pin cushion and toilet articles all complete. In the parlor are piano, center table, chairs and sofa, and a complete set of cooking utensils hangs over the kitchen stove. There are pictures on all the walls.

Such a dollhouse costs a good deal in time and labor, but little in money. A common goods box serves as the foundation, and a papa or big brother who is handy with tools can put in stairs, shelves and partitions without trouble, and until she has started on it the mother or big sister will not know how the fascination of copying a house in miniature grows on one.

A doll's schoolhouse, with desks and blackboards, is among endless variations that can be planned. Countless original features will suggest themselves to an original mind. Almost every piece of furniture to be found in a grown-up house can be purchased in doll miniature for a few cents, and, now that so many big brothers do bench work and learn to operate circular saws in manual training classes, they can be pressed into the doll cabinet business. Another way to make small girls happy for the Summer is to let them set up housekeeping in a piano box, with furniture half way between grown-up belongings and doll things. There is and inexhaustible interest to the juvenile mind, both masculine and feminine, but particularly the latter, in "playing house" and the variations the children can introduce upon this theme are legion.

Grown ups can even catch the fever, when they are pure of heart and unconventional of mind; witness the longings of Elizabeth to have a little cottage out in the park, just big enough for her and one of the babies to get into, where they might go and stay all night, and have the other two babies come and take tea with them.

Waiting.

Serene, I fold my hands and wait,
Nor care for wind, or tide, or sea;
I rave no more 'gainst time or fate,
For lo! my own shall come to me.

I stay my haste, I make delays,
For what avails this eager pace?
I stand amid the eternal ways,
And what is mine shall know my face.

Asleep, awake, by night or day,
The friends I seek are seeking me;
No wind can drive my bark astray,
Nor change the tide of destiny.

What matter if I stand alone?
I wait with joy the coming years;
My heart shall reap where it has sown,
And garner up its fruit of tears.

The waters know their own and draw
The brook that springs in yonder height;
So flows the good with equal law
Unto the soul of pure delight.

The stars come nightly to the sky;
The tidal wave unto the sea;
Nor time, nor space, nor deep, nor high,
Can keep my own away from me.

—John Burroughs.