

men as pulleys. The sails weigh two tons and a half, and there is the same weight of spare sails. There are sixteen tons of iron cable, and three tons of hempen cable. Four anchors weigh together more than seven tons; the boats more than three tons and a half. Then come the eighteen guns, which weigh together twenty-seven tons; and the stores taken by the gunners for working their guns, amount to about four tons and a half. The stores taken by the boatswain and carpenter to keep the ship and her rigging in working-order weigh more than seventeen tons. Lastly, we have three tons and a half of powder, two tons and a half of case-shot nineteen tons of cannon-balls, two tons of shell, and two tons of musket-balls and small-arms.—If all this be added together, the reader will at once see that when our little vessel floated out of Sheerness Harbour to the Nore, she carried with her more than 300 tons of valuable property.

But as a friend of ours exclaimed when we were endeavouring to impress this upon him: 'Where, in the name of all that is wonderful can it all be put? How can you live amid such a heap of incongruous matter? Where do all live? Where is the kitchen? Where do you sleep, and where do all the men sleep?'—These are all very natural questions, and it will require some little time to answer them.

To commence with the space 'under hatches' as it is called, or beneath the floor of the deck on which men and officers live. Any one who knows the shape of a ship, will see, on a little reflection, that this space will be broad and deep in the centre, gradually becoming narrower and more shallow towards both head and stern. At the extreme after end, there was a space for the captain's stores; and beneath his cabin, the bread room, capable of holding 100 bags of biscuit, each weighing a hundredweight. Then advance in forward, and beneath two of the officers' cabins, is the slop-room, where all the cloth and duck, shoes, flannel, hats, and other articles for men's clothing, are kept. Parallel with this, and beneath the gun-room, extending also some way into the bread-room, is the shell room and magazine. Each of the shells is packed in a separate box, and treated with such care that no one felt uneasy, although sitting every day at meals with 110 of them only separated from his feet by a plank, with nearly three tons of powder in the magazine close by. In a space corresponding to the slop-room, on the opposite side, was the officers' store-room for provisions. Further forward, in the centre, are the lockers for shot, holding 1260 of these gentle persuaders of thirty-two pounds of cold iron. On either side of them, and of the shell room, are holds for provisions and spirits. The nineteen tons of iron ballast are arranged just above the keel and around the lowest parts of the inside of the ship. Immediately upon these are the iron water tanks, corresponding in shape to that of the vessel; those in the centre fitting square; those towards the side circling at different angles. Six of the largest of these tanks hold each 600 gallons; two smaller ones, each 400 gallons; two of 200; twelve of 375; and eighteen of 110; making together forty tanks, holding 11,280 gallons, or more than fifty tons. These tanks occupy the central part of the ship, except a space reserved for the chain cable and a small store of provisions for daily use. Further forward is a hold for the beef and pork, with another for coal and firing. Beyond this is the sail room, where all the spare sails are kept; and lastly, quite in the bows, the store room, as they are called, but really a sort of a dark cupboard, where the boatswain and carpenter keep their stores. All this is under hatches—that is to say, a hatch must be raised to get into any of these spaces. A hatch is a square piece of the floor or deck cut out, so that it can be lifted by a ring, and furnished with locks, and so made as to keep all the lower part of the ship water-tight, or nearly so.

Next comes the inhabited portion of the ship. Commencing as before, from the after part, we had first two cabins for the captain, each extending the whole breadth of the ship. The after one was small; but with a couple of arm-chairs and a portable fire place, was a perfect little snuggerly for him in winter, to lounge with a book or play a game of chess with one of us—the fore cabin was much longer. At one side, doors open into a sleeping cabin and a large cupboard, where the charts and chronometers are kept. At the other, was an open sofa bed place and a cabin where the steward kept all the glass, crockery, &c., for the table. The open space of the cabin was some seven paces by six, and between six and seven in height, being lighted by a sky-light on deck. In the centre, was a large square table, where many a jolly party of eight or ten have sat down to as good a dinner as was ever given afloat. Some well-filled book-shelves, a writing-desk, and a few chairs, with a barometer and compass, completed the furniture.

Next came the gun-room, where the gun-room officers—namely, two lieutenants, master, surgeon, purser, and assistant surgeon-mess.—This is also a square cabin, lighted by a sky-light six paces by five, of the same height as the captain's cabin, furnished simply with a square table a few chairs, lockers for wine, which are converted into a sort of sofa by a cushion, and drawers and glass-stands for the furniture of the table. At one side are two cabins for the two lieutenants; at the other side, are doors opening into

a narrow passage, which leads from the captain's cabin, past the gun-room, on the lower-deck, and separates the gun-room from the cabins of the master, surgeon, purser, and assistant surgeon; which correspond with those of the lieutenants on the opposite side of the ship, but are carried further forward. All these cabins are about six feet square. There is a bed-place with drawers beneath it, a wash-hand-stand, a flap which can be raised to form a table, book-shelves, a chair and a chest of drawers; and this completes the home of each officer. Yet it is surprising how much is stowed away in so small a space, and how much taste is often displayed in setting off one's own particular corner of the ship to the best advantage. Pictures and looking glasses, Turkish rugs and Greek lace, velvet and gilding clothes and books, the cumbersome cases of uniform, gun-cases, telescope, sextant, and the curiosities picked up at different ports, to prove our remembrance of old friends when arriving again in England.

The midshipmen's berth is on the same side as the lieutenants' cabins, just abaft the main hatchway it is merely a cabin some five paces square, nearly filled by a table, over which swings a lamp and is lighted like all the officers' cabins, by what are called bulls eyes—pains of glass let in through the deck. Around the table are square lockers, and on the top of these the middies sit. Of course there is no room for chairs. Some shelves above receive the sextants, glasses, desks, and books; a recess is fitted up for crockery and the berth is complete. In this we had two mates, five midshipmen, a clerk, and a master's assistant. None of these officers sleep in cabins, but are slung at night in hammocks like the men, in a part of the lower-deck, just outside their berth, where each has his chest arranged. In this chest he must keep the whole of his dress and property, and a drawer for his washing utensils.

The lower-deck or the space where the seamen live, cook, eat, and sleep, was 54 feet long 6 feet 6 inches in height between the beams and 28 feet in breadth at the broadest part.—In this space 130 seamen had to find accommodation; not only for themselves, but for the galley or kitchen, and for all the mess-tables and stools—to live by day when not on deck, and to sleep by night. It was as well supplied with light and air as is any ship of the class but still susceptible of improvements in these respects. Along each side a number of mess-tables are arranged, each capable of accommodating a dozen men, six on each side, on a stool of the length of the table. Shelves arranged on the side of the ship receive the plates and 'mess-gear,' as the cookery of the men is called.—There is a good deal of pride in the show the men can make in their way, and a little rivalry between different messes. All along the beams are rows of hooks, fourteen inches apart, to which the hammocks are slung at night for the men to sleep in. The hammock is simply an oblong piece of canvas, with holes at each end, through which lines are passed, brought together, and the hammock thus hung to the hooks. It contains a hair mattress and pillow, and a blanket or two for the men, the officers adding the luxury of sheets. In the morning every hammock is rolled up, tied into a fixed size and shape, and arranged around the bulwarks of the ship, being uncovered in fine weather, but protected, when necessary, by a covering of tarpaulin. Thus there is no sign of a sleeping-place on the lower-deck during the day, all the hammocks being above.

The galley or kitchen would sadly puzzle a shorecook. No fire is to be seen; no joints are seen roasting. All is enclosed in a square iron case; there is a furnace below, surrounded by water, and into this sauce-pans of all shapes and sizes are let in—from the chaldron which boils the soup for the whole ship's company, to the sauce-boat for the officers' fish—all boiling, baking, roasting so called, toasting, stewing for the meals of the captain, the two officers' messes, and the whole of the men, are thus done in an iron box some five feet square, and in many ships distilled water is prepared at the same time. In some of our large troop-ships, 800 gallons of distilled water are thus prepared every day.

Such was our craft below. On deck we had eighteen 32-pounders; and aloft, the usual sails of a three-masted, square-rigged vessel. This was our FITTING OUT. We were now ready for sea; we sailed where our duty called us.

From Godey's Lady's Book for September.
AUTUMN AND ITS MEMORIES.
SEPTEMBER.

THE stated changes of the seasons serves as monitors to remind man of the flight of time, and on such occasions we are wont to pause and reflect on the past, in a mood calm and serious if not serene.

A reflection, like honest confession, is good for the soul; for I hold that there is deep-seated in man a germ of purity, superior to the power of sin, and beyond the reach of evil temptations, which, under the influence of solitary meditation will never strive to gleam out in mild rays of gentle peace, to light up and make pleasant the way of those who choose to travel on to the goal of happiness and perfection.

"For Virtue, though obscured on earth, not less Survives all mortal change in lasting loveliness."
The memory is peopled with many images of

interest and beauty that have faded from earth forever, just as the verdure which now lingers upon the parent stem is all soon to be gathered to the tomb of Autumn, to be followed by a mantle of more grim and solemn hue. The north wind's blast, like the cold breath of death to the blooming cheek of the fair and lovely, will soon clothe the nature in robes of solitude and gray mourning, and cause the soul to lock with an eye of faith on and up to the final triumph of the principal of LIFE over all DECAY, when guardians of beauty and pleasure shall be decked and festooned with habiliments that no frost can wither or cause to fade; when "truth, love, and mercy" shall descend from God in triumph, and cause those loved ones who have long slept in death to arise from the tomb with "beauty immortal" bearing upon their cheeks the stamp of eternal life, blended with "smiles and roses."

"See Truth, Love, and Mercy in triumph descend—
And Nature all glowing in Eden's first bloom;
On the cold cheek of Death, smiles and roses are blending,
And beauty immortal awakes from the tomb."

FAIR WOMEN! what scenes of gladness and sorrow are associated with thee and autumn's memories; gladness for the smiles of thy beauty and the welcome of thy voice, and sorrow that the glad spell should ever be broken—and so soon! The velvet echo of thy anxious step, the soft pressure of the silken finger, the silvery tones of the glad and happy voice, fit through the portals of the memory, had created in the heart a melody that chimes with sweet cadences, in the strange music of the autumnal breeze that fans the brow at nightfall, when fairies and unseen visitants hold their jubilees.

"Tis the deep music of the rolling world,
Kidding within the strings of the waved air
Æolian modulations."

But the return of Autumn does more than excite the tinsel sweets of memory's fancy and feed the imagination with fairy scenes; it awakes in the ideality of the soul living emblems of all that is great, good, and useful on earth, and suggests to the appetite and affections legitimate pursuits and proper bounds; for this is the season that stands as a pause between Life and Death, holding in its lap the consummate fruits of Time, and culing with the hand of judgment, guided and directed by the eye of Nature, such yieldings as are worthy to be garnered in the treasury of useful objects, allowing others to return promiscuously to their primitive elements, some as abortions of that which naturally should have been good, and some as naturally inferior, and designed for inferior but none the less essential ends. Thus may the scenes and fruits of Autumn not only call up memories of the past that seem to connect the soul by ties of silken beauty and cords of immortal sympathy with the future, but all surrounding materiality is made to assume and exhibit a more palpable and pleasing adaption to the combined uses and purposes of physical and spiritual life. 'Tis the season of perfection, yet witnessing decay; concentrating all memories of the past, and inviting a scope without bounds for the flights of Fancy, and the soarings of the Imagination.

Indian Summer measures its legendary course along the walks of Autumn and the hazy sweetness of the air seems fain to tell of more than language knows or flesh can comprehend, and every distant echo essays to wail some glad, yet melancholy note, which faintly lingers for a moment, and is then wafted away upon the chill breath of incense-wind, as

"Music dies along a shivering lyre."

And then, gleams of memory and hope vie, and images of beauty and perfection fill their soul; forms of heavenly grace, clothed in the charms of VIRTUOUS WOMEN, arise in resplendent beauty, and point the way along the golden steps that lead up "to glory and to God," and bid MAN follow! and as the happy throng thus pass, up and on, AUTUMN smiles, and, reaching OVER Winter, strikes glad hands with SPRING.

THE LAZY BOY.

A lazy boy makes a lazy man just as a crooked twig makes a crooked tree. Who ever yet saw a boy grow up in idleness, that did not make a shiftless vagabond when he became a man, unless he had a fortune left him to keep up appearances. The great mass of thieves, paupers, and criminals that fill our penitentiaries and almshouses, have come to what they are by being brought up in idleness. Those who constitute the business portion of the community, those who make our useful men were trained up in their boyhood to be industrious.

When a boy is old enough to begin to play in the street, then he is old enough to be taught to work. Of course we would not deprive children of healthful, playful exercise, or the time they should spend in study, but teach them to work, little by little, as the child is taught to learn at school. In this way he will acquire habits of industry that will not forsake him when he grows up.

Many parents who are poor let their children grow up to fourteen or sixteen years of age, or until they can support them no longer, before they put them to labor. Such children, not having any idea of what work is, and having acquired habits of idleness, go forth to impose

upon their employers with laziness. There is a repulsiveness in all labor set before them, and to get it done, no matter how, is their only aim.—They are ambitious at play, but dull at work.—The consequence is, they rove about the world, get into mischief, and finally find their way to the prison or almshouse.

With the habits of idleness vice may generally if not invariably be found. When the mind and hands are not occupied in some useful employment, an evil genius finds them enough to do. They are found in the street till late in the evening, learning the vulgar and profane habits of those older in vice; they may be seen hanging around groceries, bar rooms, and streets where crowds gather but they are seldom found engaged in study.

From the Boston International Journal.
THE VICTORIA BRIDGE AT MONTREAL.

The works of this stupendous undertaking being now in active progress, a short account of what has been not inappropriately designated the greatest work of modern times, cannot fail to be interesting to our readers.

As is already well known, the commercial reason given for the construction of the Victoria Bridge, is the necessity of bringing in the exhaustless products of Canada West, and of the western States of the Union—such as Michigan, Illinois, Iowa, Wisconsin, Minnesota, &c.—without break of gauge or of bulk, from the extreme western point of British North America to the Atlantic seaboard. The promoters of the undertaking allege that, by means of the bridge, they will be enabled to meet the requirements of this traffic more cheaply and expeditiously than by any other existing route, whether of rail or of water; and they must be doubtless strong in the faith, as its cost is to be about seven millions of dollars, or about one-seventh of the total expense of building the 1,112 miles comprising the Grand Trunk Railway of Canada.

The bridge is to be tubular, on the plan of the celebrated Britannia Bridge over the Menai Straits, in north Wales. It will consist of 26 spans or spaces for navigation between the twenty-four piers (exclusive of the two abutments) for the support of the tubes. The centre span will be 330 feet wide, and each of the other spans will be 2442 feet wide. The width of each of the piers next to the abutments will be fifteen feet, and the width of those approaching the two centre piers will be gradually increased, so that these two piers will each be 18 feet wide or 3 feet more than those next the abutments. Each abutment is to be 242 feet long and 90 feet wide, and from the north shore of the St. Lawrence to the north abutment there will be a solid stone embankment, (faced in rough masonry towards the current,) 1200 feet in length. The stone embankment leading from the south shore of the river to the south abutment, will be 600 feet long. The length of the bridge, from abutment to abutment, will be 800 feet and its total length from river bank to river bank will be 10,284 feet, or 176 feet less than two English miles.

The clear distance between the ordinary summer level of the St. Lawrence and the under surface of the centre tube is to be 60 feet, and the height diminishes towards either side, with a grade at the rate of 1 in 130 or 40 feet in the mile so that at the outer or river edge of each abutment the height is 36 feet above the summer level. The summer depth of water in the St. Lawrence varies from 14 feet about the centre to 4 feet towards the banks, and the current runs, at the site of the bridge, at a rate varying from seven to ten miles an hour.

Each of the tubes will be 19 feet in height at the end whence they will gradually increase to 22 feet 6 inches in the centre. The width of each tube will be 16 feet, or 9 feet 6 inches wider than the rail track. The total weight of iron in the tubes will be 10,400 tons, and they will be bound and riveted together precisely in the same manner and with similar machinery, to that employed in the Britannia Bridge. The principal part of stone used in the construction of the piers and abutments is a dense, blue limestone found at Pointe Claire on the Ottawa river, about 18 miles above Montreal, about 8 above the confluence of that river with the St. Lawrence. A large village has suddenly sprang up at the place, for during the last twelve months, upwards of 500 quarrymen, stone masons and laborers, have been employed there. Every contrivance that could be adopted to save manual labor, has been applied and its extent will be judged from the fact that the machinery at the Quarry and the adjacent jetty has (including the cost of the jetty) involved an outlay of \$150,000. Three powerful steam Tugs and 35 Barges, each capable of carrying 200 tons of stone, have been specially built for the work, at a cost of about \$120,000. These are used for the conveyance of the stone to piers, and by the end of September next a railway on the permanent line of the Grand Trunk track, will be laid down from the quarry (close to which the permanent line of the Grand Trunk track, will be laid down from the quarry (close to which the permanent line will pass,) to the North shore of the St. Lawrence, so as to convey along it, the stone required for the North embankment and for the northern abutment.