

Bottle Papers.

One of the interesting travelers known as "bottle papers," and which was set afloat by our old friend Captain Henry Plater, of the ship *Patriarch*, has just come to hand. The following are the particulars:

The *Patriarch* was on her voyage to Sydney, passengers all well, when, on 1st April, 1887, in latitude 1° 7' S., longitude 25° 54' W., the bottle was thrown overboard, and a slip of paper with the above details was inclosed within it.

The bottle was eventually picked up on the shore of Galveston Island, in the Gulf of Mexico, having traversed (through the aid of the equatorial current) the Atlantic from the point of jettison to Trinidad or Tobago; thence it passed to the Caribbean Sea, and when opposite Cape Gallinas it trended to the channel between Yucatan and Cuba, passing thus into the Gulf of Mexico. It probably took the round of Campeachy Bay, thence traversing the west side of the Gulf until off Galveston Island. It was picked up on the 18th May, 1888, by Henry Middlegge, who was collecting driftwood along the shore. Thus in 413 days it was carried by the current not less than 5,500 miles, being at an average rate of 13½ miles per twenty-four hours.

Another of Captain Henry Plater's "bottle papers," which had been thrown overboard six days earlier, has reached us. It is to the following effect:

The *Patriarch*, 14 days out from London, and bound to Sydney, was in latitude 12° 55' N., longitude 25° 47' W. All well.

This bottle was picked up at Ambergris Cay, British Honduras, on the 25th of May, 1888. Taking the Cay to be in latitude 18° 6' N., longitude 87° 50' W., the bottle traveled for some time probably on the northern edge of the equatorial current, though afterward getting into its heart, a distance of 3,620 miles on a course N. 84° W., which gives the current a mean rate of 8½ miles a day. The rate would, from the position, be slow at first, and subsequently accelerated.

Mr. A. G. Allan, of Te Kao, North Cape, New Zealand, writes as follows:

While traveling on the Seventy-Mile Beach, West Coast, about a mile north of the small islet called Motu Pea, on May 4, one of the natives of Te Kao observed a bottle stranded on the beach, and found it contained a paper. He broke the bottle and abstracted the document. According to instructions given on former occasions, it was brought to me. On perusal it proved to be one of the marine cards cast into the sea to ascertain the direction of the ocean currents, by order of the Imperial Board of Admiralty in Berlin, from the ship-of-war *Bismarck*, on her voyage to Sydney, two years and three months ago. The card, which is printed in the German language, is considerably chafed at both ends, and some of the words are obliterated; but the main portion of the print and writing is perfectly legible. I give the translation:

"This bottle was put overboard at noon on February 15, 1886, in latitude 47° 17' S., longitude 111° 56' 50" E. from Greenwich. Ascher, on board the ship *Bismarck*, on a voyage to Sydney. Whoever finds this paper is requested to send it to the Imperial Admiralty in Berlin." It is also requested that the finder should add some particulars as to the time and place at which the bottle was found. The existence of an ocean current setting in from the Indian Ocean toward the southern end of New Zealand is a fact well known for many years. It strikes the southern end about the Bluff and chiefly passes to the eastward, but apparently New Zealand to some extent divides it, and though the bulk passes to the eastward, a small stream comes up to the westward of New Zealand, and naturally impinges against the western side of the northern part of the Auckland provincial district. The bottle, when thrown overboard, probably traveled with the easterly set that runs southward of the Australian continent, thence through Bass' Strait, and onward toward the coast of New Zealand.—*Nautical Magazine*.

Adulteration of Food.

In reporting favorably to the House a substitute for the Lee bill to prevent the manufacture or transportation of adulterated articles of food, drink, and drugs, made in one State and intended to be sold in another, the House committee on agriculture, referring to the extent of adulteration, says:

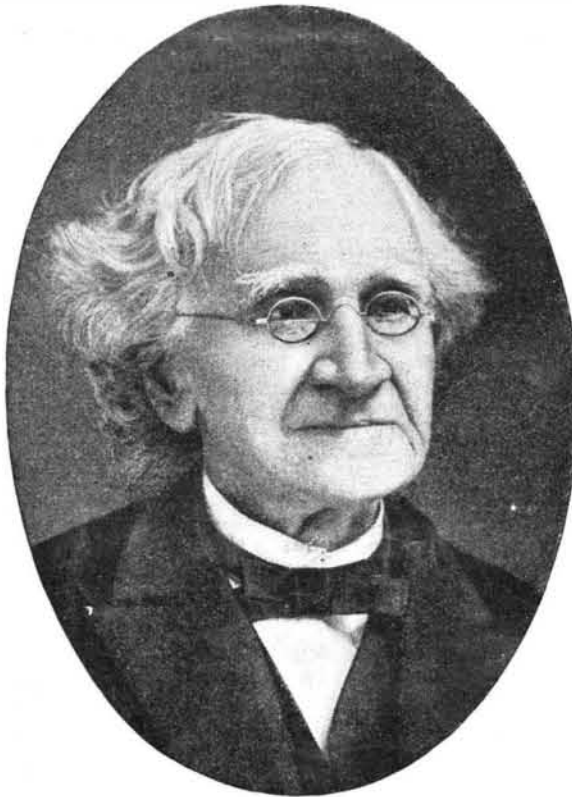
"This state of facts amounts not only to a premium upon dishonesty, but is a threat to national health. Honest manufacturers and dealers are placed at a disadvantage or are forced into a reckless competition with fraud. Legitimate trade is handicapped and demoralized. It tends to make an Ishmaelite of both manufacturer and dealer. Recent investigations in the department of agriculture of cheese deceptions, frauds in milk, adulteration in beer and spirits, in spices and condiments and other things in daily use as food and beverage, emphasize the necessity for prevention or repression of these disreputable practices stimulated by the greed of gain. Liquids, perhaps, even more generally than solids, are subject to this sophistication. Aged brandies are made from diluted alcohol; cheap wines are mixed and manipulated to imitate expensive brands; beers are doctored to avoid the use of

expensive hops, and to cheapen the product or simulate some desired quality. Teas are mixed, colored with poisonous minerals, and spent leaves are dried and placed a second time upon the market. The animal industry which asks for the protection proposed in this bill reaches all the levels of life from the millionaire to the day laborer. It embraces more than all other industries in the country combined, the property of the poor."

OUR FIRST IMPORTED LOCOMOTIVE.

The first locomotive imported into this country was bought in Manchester, England, of the Stephenson Company, by Kirk Boott, for the Boston and Lowell Railroad corporation. It arrived in this country in 1834, and, for convenience of transportation, had been stripped as far as possible, and upon arrival in Boston was placed on several boats of the Middlesex Canal Company and drawn to Lowell. With the locomotive came a planer and tools for building locomotives, and as soon as patterns could be prepared a new locomotive was commenced. The imported machine was put together, and named "The Stephenson," in honor of the builder.

The new engine made at Lowell was named "The Patrick," after the president of the corporation, Patrick T. Jackson. This locomotive was completed three or four days before the Stephenson made its trip. The Stephenson weighed eight tons, and had four



MR. ELI COOPER AT THE AGE OF 84 YEARS.

wheels, with outside connections. The boiler had 113 tubes, which were small and intended for burning coal; but in using wood they became clogged, and in order to clear them out the locomotive was stopped, and the fireman cleaned them with a long rod. The coach which was used in the trip was a small affair, with seats upon the side. The first trip was made from Lowell in June, 1835, and the distance, 26 miles, to Boston, made in seventy-seven minutes. The return trip was made in eighty minutes.

John Barrett was the first conductor and Eli Cooper, whose portrait is given herewith, the engineer. The passengers were: Patrick T. Jackson, James F. Baldwin, the engineer, Major George Whistler, and associates. Directly after the opening of the road, "The Patrick" was put on, and after running four years "The Stephenson" was put in the machine shop and made over by Eli Cooper and others.

Mr. Cooper is now living in Woburn, Mass., at the age of 84. He was born in Stockport, England, December 16, 1804, and came to this country with his parents in 1806. In 1824 he went to Lowell, where he learned the machine trade, and worked for the Locks and Canals Company, the Lowell Machine Shop, and the Boston and Lowell Railroad Corporation.

Work in the Navy.

While the good work of building new vessels of war progresses, the old wooden ships are not being entirely neglected. At the various yards considerable work is being done in the way of rebuilding and repairing a number of these now old but still useful crafts. At the Portsmouth, N. H., yard the *Kearsarge* is being extensively repaired, and will be ready for her officers October 1. The estimated cost of the repairs to this ship will be \$47,792.26. At the same yard the training ships *Saratoga* and *Portsmouth* will be entirely rebuilt, at an estimated cost of \$68,000, and will be ready about the first of the year. At the New York yard the *Richmond* is fitting out, ultimately to be the flagship of the

Asiatic station, and will cost, when completed, \$20,596.94. She will be ready for sea in about two months from the present time.

At the Norfolk yard the *Pensacola*, which will be flagship of the North Atlantic squadron, is being repaired, and the estimated cost to complete her entire is \$27,311. She will be ready in about five months. This ship will receive an entire new set of boilers, which are now being forwarded from the Washington Navy Yard, where they have been in store for some time.

The double-turreted monitor *Puritan* will shortly be sent to the yard to be rebuilt, in accordance with an act of Congress approved August 3, 1886. The training ship *Jamestown* will also be repaired at this yard, at an estimated cost of \$12,000, and be ready in about three months.

At the Mare Island yard the greatest amount of work is being done. The *Iroquois* is nearly ready, and her estimated cost, when finished, will be \$29,400. She will be ready for sea September 15. The steamship *Monongahela* is also being overhauled and repaired at this station, at an estimated cost of \$25,000. She will be sent again to the South Pacific as storeship of the station, with headquarters at Payta, Peru. She will be ready October 1.

The surveying steamer *Ranger* is being fitted for one year's service on the Pacific coast at an outlay of \$9,200, and is now ready to proceed with her work. The *Mohican* is now in the dry dock, and after some slight repairs are put on to enable the ship to leave the dock, she will be repaired at an estimated cost of \$14,800, and be ready in sixty days.

The *Vandalia* and *Adams*, of the Pacific squadron, are now on their way to the Mare Island yard for repairs, and it is expected both ships will be there by the middle of October. The double-turreted monitor *Monadnock* is being rebuilt also at the California yard, at an estimated cost of \$600,000, and will be ready in about two years.—*Army and Navy Journal*.

Hydrographic Expedition.

Commodore Walker, chief of the Bureau of Navigation, has decided to send another expedition of naval officers to Mexico and Central America to make the necessary observations in various points in those countries, in continuance of the important work of determining secondary meridian of longitude by the use of the telegraph. Commodore Walker has from the beginning been most enthusiastic over this species of scientific work, and has given much time and attention in bringing it to perfection. Lieut. G. L. Dyer, hydrographer to the bureau, has been a most able assistant to his chief, and all of the officers on duty in the hydrographic office, in fact, the entire service, are much interested in this particular work, which is attracting the attention of the scientific world.

In the last work of this kind, which was finished about three years ago, the chain of longitudes was carried from Galveston, Texas, to Vera Cruz, on the Gulf coast of Mexico; also from Panama up the west coast of Central America to Libertad in Salvador. It is now proposed to connect these points. From Vera Cruz a submarine cable extends to Coatzacoalcos on the Isthmus of Tehuantepec. Thence a land line extends across the Isthmus to Salina Cruz on the Pacific, and from this point a cable is carried down the coast. In making this measurement, Vera Cruz and Coatzacoalcos will probably be the first points occupied. An observing party will be stationed at each of these places, and the difference of longitude between them will be determined. The exact longitude of Vera Cruz being already known, it will be only necessary to apply this difference of longitude to that position to give the position of Coatzacoalcos. This being done, the Coatzacoalcos party will cross the Isthmus to Salina Cruz and the Vera Cruz party will occupy the Coatzacoalcos station, and thus the work will proceed until all the links of the chain have been measured, when the expedition will return. The stations occupied will probably be the following, viz.: Vera Cruz, Coatzacoalcos, and Salina Cruz in Mexico, Libertad in Salvador, and San Juan del Sur in Nicaragua.

The expedition will leave the United States about the middle of November, in order to arrive in Mexico at the beginning of the dry season, as clear and dry weather is absolutely necessary for the requisite astronomical observations.

The following officers will be detailed for this service, viz.: Lieutenant J. A. Norris in charge, Lieut. Charles Laird and Ensign J. H. L. Holcombe, together with another officer who has not yet been selected. These officers are all experienced in the work. Lieut. Norris has been connected with all the longitude expeditions sent out by the Bureau of Navigation since 1874, Lieut. Laird first became connected with the work in China in 1881, and Ensign Holcombe is experienced in similar astronomical work, though he has not before assisted in measuring longitudes.

Five months will probably be necessary to complete the measurements, and the party will return home early in the spring of 1889. Several months will be employed in making the computations, and the results will then be published.—*Army and Navy Journal*.