

## ANNUAL MEETING OF THE DRY DOCK ASSOCIATION.

The annual meeting of the Dry Dock Managers' Association was held at Buffalo on Friday last. Those present were: Edward Gaskin, superintendent Union Dry Dock Co., Buffalo; Haughton Mills, Mill's Dry Dock Co., Buffalo, and secretary of the association Frank Wrights Cleveland Dry Dock Co., Cleveland; George Quayle, Ship Owners' Dry Dock Co., Cleveland; Edwin Peck, of Springwells Dry Dock, Detroit, and John C. Parker, Detroit Dry Dock Co.; Thomas Dunford, Port Huron Dry Dock Co.; Thomas Miller, of Miller Bros., Chicago; W. I. Babcock, Chicago Shipbuilding Co.; Frederick Starkey, Milwaukee Ship Owners' Co.; Burger & Burger, Manitowoc, represented by proxy; James Davidson, Bay City Dry Dock Co.

Officers were elected as follows: President, George Quayle, of Cleveland, vice-president, W. E. Fitzgerald, of Milwaukee, secretary and treasurer, Hamilton Mills, of Buffalo.

Although a committee from the Lake Carriers' Association made strenuous efforts for a reduction in charges, and set forth that a flat rate of 10 cents per ton should be charged instead of 24 cents for the first 500 tons and 10 cents for each additional ton, the dry dock men would not concede to the request, stating, it is alleged, that there was nothing to be made at a reduced rate. It was, however, decided that the dockage charges on cargoes be reduced from 10 cents to 5 cents per 1,000 tons and 2 1/2 cents for over 1,000 tons. Other charges will remain as they have been. The next annual meeting will be held at Port Huron, Jan. 10, 1890.

The members of the Lake Carriers' committee that met with the dry dock managers were Capt. J. W. Moore and J. C. Gilchrist of Cleveland, and Capt. M. M. Drake of Buffalo.

## THE BABCOCK &amp; WILCOX BOILER.

The firm of Babcock & Wilcox have scored an important deal in contracting to place their water tube boilers in the new steamer orders for the construction of which has just been placed in the hands of the Chicago Ship Building Co. The adoption of the Babcock & Wilcox boiler in one of the largest freight steamers on the lakes as the new boat will be, being 405 feet over all and of 6,000 tons' capacity on a moderate draft, is a departure which will be closely watched by builders and owners at all lake ports and on which the future of this form of boiler will more or less depend.

Although this type of boiler, which has been illustrated in the columns of THE RECORD, has for years been extensively used on shore, it is only recently that the makers have made any effort looking to its use in large steamers and especially freight steamers. The latest type of the Babcock & Wilcox water tube boiler for marine purposes follows the well-known principle of design of the stationary types except that the sides of the boiler and furnace are formed by water tubes and that a change has been made in the size and arrangements of the tubes, the five lower rows of tubes immediately above the grates are 4 inches in diameter, and those above 2 inches in diameter, the latter arranged in groups of four each, each of which group is accessible through a single opening in the headers.

The headers are sinuous in form so that the front and back of the boiler is practically a solid water wall, and the tubes staggered. One feature of the construction of these headers is that they are now made of open-hearth steel and hydraulic forged from rolled plate, the ends are welded in, and the two tiers of headers connected together and to the drum and the lower circulating pipes by wrought iron tubes secured by expanding in the usual way. The main tubes are also expanded in the headers, there being no screw joints in the boiler. Access to the ends of the tubes is had by means of a plate on the front and back headers, one plate for each 4-inch and one for each nest of four 2-inch tubes. The joint on the outside of the header is a ground one, and the dog carrying the stud, which is placed inside the header, is so made that in the event of the stud breaking there, will be only a slight leakage. The plate riveted to the drum to receive the ends of the tubes connecting the back headers with the drum is of open-hearth steel forged to shape in a hydraulic press. Above the boiler there is a feed water heater, so arranged that it may be shut off and the feed introduced directly into the drum.

During the past year Mr. T. T. Milton, chief engineer surveyor to Lloyd's Registry of Shipping, read two papers before the institution of naval architects on water tube boilers, in which he gave some particulars of a Babcock & Wilcox boiler fitted on board the steamer Nero. As showing the development in the recent design it is interesting to note that in the Nero the tubes above the furnace are all 1.5 inches diameter, and that instead of horizontal water walls on the sides the tubes are vertical, 3 inches diameter and about 9 feet long, spaced five inches from center to center, with a sheet of one-fourth inch asbestos board, backed by wrought iron plates, outside of them. The tubes in the feed water heater are 3 inches diameter and about 7 feet 6 inches long. The working pressure is 200 pounds.

This boiler has 272 square feet of heating surface and 44 square feet of grate and is designed for 450 I. H. P. Its weight with water and casings, is about 27 pounds per square foot of heating surface, and in steaming condition, including smoke pipe, boiler fittings, brick baffle plates, etc., 32 1/2 pounds.

## OBITUARY.

WILLIAM N. BURTON.

A pioneer in the annals of lake navigation and its development as well as an underwriter in the earliest stages of marine insurance on the lakes, passed away at Detroit last week, in the person of Mr. William N. Burton, aged 78 years, whose remains were interred at Milwaukee, Wis.

William N. Burton was an old and well-known marine insurance man. He was the brother of J. C. Burton, of the firm J. C. Burton & Son, of Detroit, fire and marine underwriters. He was connected with the Columbian and other marine insurance companies with headquarters at Buffalo, and was actively engaged in marine work for about thirty years. He was one of the first tugmen engaged in the work at Chicago, and when the light-house at South Manistowic was built he was the first one put in charge of it. Since his retirement from business several years ago, he has made his home with relatives in Chicago and Milwaukee. About two years ago he went to reside at Detroit, where he lived with his daughter until the time of his death. He was born in 1817 and was therefore 78 years old.

## TRANSFERS OF VESSEL PROPERTY.

Among the more recent transfers of vessel property recorded at the Milwaukee customs office are the following:

Tug Ralph M. Cooper—Two, Rivers Manufacturing Co. to Henry Troy, of Two Rivers, the whole, \$3,500. Schooner O. Shaw—A. D. Thorp, sheriff of Door County, to William Barnett, of Kewaunee County, Wis., the whole, \$130. Tug Eliza M.—Fred Mitchell, of Oshkosh, to Joseph Davall, of Kewaunee, the whole, \$100; same, Joseph Davall to George W. Wing and Charles Wattawa of Kewaunee, the whole \$170; same, George W. Wing and Charles Wattawa to Charles Malchow, the whole, \$300. Tug Welcome—Mathilda Ellison to N. S. Cornell and David Neal, of Sheboygan, two-thirds, \$350; same, Rudolph John to U. S. Cornell and David Neal, one-third, \$300. Schooner Jones—Evan Johnson to Claus Jorgenson, of Racine, one half, \$950. Schooner Evaline—E. A. Northway and Martha Galliena to William Hood, of Racine, the whole, 2,800.

Grand Haven furnished the following record of recent vessel transfers.

Tug E. G. Crosby—E. G. Crosby to J. A. Hitchcock and B. B. Rice, of Muskegon, one-fourth, \$4,000. Tug (1), M. Field—J. A. Hitchcock to E. J. Humphrey and William J. Watson, of Muskegon, one-fourth, \$1,000. Steamer Carrie E. Nyraon—J. A. Hitchcock to E. J. Humphrey and William J. Watson, of Muskegon, one-fourth, \$1,000. Steamer Nyack—J. A. Hitchcock to E. J. Humphrey and William J. Watson, of Muskegon, one-fourth, \$10,000. Tug E. G. Crosby—J. A. Hitchcock and B. B. Rice to E. J. Humphrey and William J. Watson, of Muskegon, one-fourth, \$4,000. Schooner Rambler—Harry Raffensand, of Holland, to Fred H. Fitch, of Montague, the whole, \$290. Schooner F. H. Fitch—Fred H. Fitch, of Montague, to Claus J. Blink, of Holland, the whole, \$325. Steamer Bon Ami—Reuben T. Rogers to Calvin Whitney, of Saugatuck, five-sixteenths, \$1,000. Schooner Arctic—United States marshal to Robert Follock, of Charlevoix, the whole, \$250.57.

## THE SUN'S RAYS.

It is not infrequently asked why, with the sun at this season 3,000,000 miles nearer the earth than it is in June, we should have much colder weather than in that month. It is because the rays of the great heat-radiating orb glance obliquely across our part of the earth at this time of the year, but later the earth swings into a position to get the rays squarely, and then, at even the much greater distance, we feel their power in a greater degree. Down below the equator, where it is summer at the time that the sun is nearest the earth, the people who live there get some weather that we would think unbearable. For the same reason the winters in the parts of the earth where the sun is farthest away at the time that his rays are glancing across the earth instead of shining directly down are as much colder than ours as the summers are warmer. After all it is pretty nice to live in a temperate climate where great extremes of heat and cold are not usual.

It is true that January is usually much colder than December. The lengthening of the days is not the reason for it though, but because, although the earth is getting a few minutes more of sunlight each day, it is too little to make any impression and it still loses more heat through the long night than it can get back during the short day. In the same way the summer is hotter after June than before, though each day is growing a very little shorter than the preceding one. But the earth has been slowly warming up from late February and the nights are still too short to lose as much heat through the night as is received through the still long day.

## NOTES.

H. G. TROUT & Co., King Iron Works Foundry of Buffalo, N. Y., are now making the Trout Wheel when wanted of a mixture of cast iron and steel which gives double the strength. They also make other castings of same metal.

MAJOR GEORGE METCALF, for nearly twenty years past the treasurer of the American Ship Windlass Co., Providence, R. I., died on the 14th inst. in his 70th year. Mr. Metcalf spent some of his early life abroad, went through the late civil war and will long be remembered as a model citizen, an ardent patriot, a gallant soldier, a generous friend, a devoted husband and father, and a man of distinguished ability and fidelity.

APPROPOS of the initial use of water tube boilers in lake freight steamers, we note the following prominent and well known types: Belleville fitted in the lake-built twin screw steel passenger steamers North West and North Land, running between Buffalo and Duluth; Ward coil boiler, the Mosher, Roberts, Almy, Towne, Scabary, Warrington, McBride & Fisher and the Babcock & Wilcox first to be fitted in a lake freight steamer. There are fully as many types built abroad.

The Dominion of Canada has expended more than \$60,000,000 in the construction of its canal system. The larger part of this expenditure has been made with the view of providing a fourteen foot waterway from the Great Lakes by the St. Lawrence to Montreal. Improvements now being made, which will probably be completed in two years, will give a depth of fourteen feet, with locks 270 feet between gates, and forty-five feet in width. Upon its completion, this route to the seaboard will be found the cheapest water route to the sea. Enormous quantities of grain and other products centering on the lakes for export will then be transhipped at Montreal, which, under existing conditions, are sent abroad by other routes.

The sale of their shipyard property at Sheboygan, Wis., by Rieboldt, Wolter & Co. to the coal-handling firm of C. Reiss & Co., announced recently as about consummated, is in reality a transfer to the Chicago & North-Western Railway Co. and the premises will be utilized by Reiss & Co. In connection with the railroad property now occupied by them under a nominal lease running for a term of years, the aim of the railway company being to secure business for its rolling stock out of Sheboygan. The price to be paid for the shipyard property is \$13,000. Capt. Conrad Starke, the Milwaukee member of the statement that the shipyard will not be removed to Sturgeon Bay. The intention, he says, is to locate upon a suitable site farther up the river at Sheboygan provided a fairly liberal business spirit is evinced by the owner of the property in question. Per contra the Sheboygan Journal claims that Rieboldt, Wolter & Co., are considering an offer from the business men of Sturgeon Bay for the removal of their plant to that point.