

wine by the addition of an alkaline mineral water, such as that of Vichy, is explained by the preceding facts.

#### DEATH OF THACKERAY.

This eminent English novelist died suddenly in his bed some four weeks since,—the precise date has escaped us. The *Times* gives the following account of his last hours:—

“He was suffering from two distinct complaints, one of which has now wrought his death. More than a dozen years ago, while he was writing ‘Pendennis,’ it will be remembered that the publication of that work was stopped by his serious illness. He was brought to death’s door, but was saved from death by Dr. Elliotson; to whom, in gratitude, he dedicated the novel when he lived to finish it. But ever since that ailment he has been subject every month or six weeks to attacks of sickness, attended with violent retching. He was congratulating himself the other day on the failure of his old enemy to return, and then he checked himself, as if he ought not to be too sure of a release from his plague. On Wednesday morning the complaint returned, and he was in great suffering all day. He was no better in the evening, and his servant, about the time of leaving him for the night, proposed to sit up with him. This he declined. He was heard moving about midnight, and he must have died between two and three in the morning of Thursday. His medical attendants attribute his death to effusion on the brain. They add that he had a very large brain, weighing no less than 58½ oz. He thus died of the complaint which seemed to trouble him least. He died full of strength and rejoicing, full of plans and hopes. On Monday last he was congratulating himself on having finished four numbers of a new novel; he had the manuscript in his pocket, and with a boyish frankness showed the last pages to a friend, asking him to read them and see what he could make of them. When he had completed four numbers more he said he would subject himself to the skill of a very clever surgeon, and be no more an invalid. In the fullness of his powers he has fallen before a complaint which gave him no alarm.”

#### COLD WEATHER AND STEAM ENGINES.

During the winter much more care is necessary to preserve steam engines from injury than in milder seasons. Feed pumps are particularly liable to be damaged by frost, and much delay and expense results from inattention to them. Every pump should be provided with a small cock, so that the water could be drawn off every night, and the same should be left open so that no dribbles or leaks from the suction or supply pipe could run in and cause damage, as pumps are so situated that this might occur sometimes. A steam cylinder needs a warm coat in winter as much as a man does, and if at no other time of the year, the pipes and all other parts containing steam should be “lagged” or felted heavily, as the loss by radiation is something to be considered. Engineers who pride themselves on a good reputation in small bills for fuel and supplies, should see to it that they do not overlook this matter. It is no argument to say that the engine room is itself warm enough, for this is not so; heat is radiated from all bodies, whether their temperature be the same or nearly the same as surrounding bodies; for it is the tendency of heat to place itself in equilibrium. The strain on a feed pump, induced by freezing the contents, amounts to one-eleventh of their bulk, as water expands in that ratio by freezing. An unloaded shell, it is said, was once filled with water and exposed during a cold day. The hole was stopped with a plug, which was thrown violently out of the shell, when the water froze, to a distance of 400 feet, while a cylinder of ice eight inches long protruded from the aperture. This experiment is one easily tried by our soldier mechanics, and though it may not be entirely successful, it serves to illustrate the force with which freezing water expands. In excessively cold weather, where steam boilers are allowed to get entirely cold over night and are fired up again in the morning, they will soon become leaky; as the constant extremes of expansion and contraction tend to produce that effect. An immense amount of fuel is wasted every year, even with the most careful supervision; but the quantity becomes enormous when little or no care is taken to prevent loss. In the

winter this is particularly the case, and some steam pipes are as cold as if they had never had a pound of pressure in them; the result is easily seen at the end of the year.

#### NEW YORK STATE STATISTICS.

Information of a very interesting character is contained in Governor Seymour’s late message. During the year 1863, the total amount expended for common schools was \$3,854,900; the total number of children attending during the year was 887,570, out of 1,356,900 persons between the ages of 4 and 21 years. The number of teachers employed is 26,213, in 11,749 school houses; and there are 1,175,335 volumes in the District Libraries.

On the 30th Sept., 1863, there were 309 banks doing business in the State, with an aggregate capital of \$109,258,147. Seventeen national banks have been established with a capital of \$2,140,000.

About 8,000,000 bushels of salt were made at the Onondago Salt S. rings last year, the increase over 1862 being one million of bushels.

The receipts of the general State fund amounted to \$7,821,891, and the expenditure to \$9,836,291, being a deficit of over one million of dollars.

Appropriations for bounties to volunteers, for sick and wounded soldiers, harbor defenses, etc., amounting to \$5,337,000, were made by the last Legislature. Of this, \$2,100,000 have been drawn.

The receipts for canal tolls in 1863, were \$4,645,095—a falling off of more than half a million of dollars from those of the previous year. The expenditures for canal repairs and salaries of office-holders, amounted to \$4,435,955.

The freight carried on the canals amounted to 5,400,000 tons; on railroads, 4,720,602 tons, and the value of property carried on, is estimated at \$447,680,000.

#### Wealth and Population of New York City.

The inaugural message of Mayor Gunther, contains some information of very general interest. New York is the largest city on the continent of America, and the third city in point of population in the civilized world. In 1840 the population was 212,852; value of real and personal estate \$252,233,515; taxes levied \$1,354,835. In 1850, the population was 515,394; value of real and personal estate \$286,061,816; taxes \$8,230,085. In 1860, population 814,254; value of real and personal estate \$577,530,956; taxes \$9,758,507. In 1863 the population was 1,000,000; value of personal and real estate \$594,196,813; taxes \$11,565,672. The expenditure of New York in proportion to population and wealth exceed those of any other city, and has been for years the source of much complaint. The total actual debt of the city is \$19,929,441. There was an increase of debt in 1863 of \$1,406,900. But the value of the real estate held by the city and pledged for the payment of the debt, is estimated at \$40,000,000. A very large surplus fund is derived from the Croton water rents, and \$2,579,534 has passed from this to the sinking fund for the redemption of the city debt.

#### Blockade Runners.

The commander of a blockade runner usually gets £800 a round trip from Bermuda or Nassau, and the privilege of purchasing twelve bales of cotton for £15 at Liverpool. It is only possible to make one trip during a month from Bermuda, but two could be made from Nassau. The risk to the commander is fearful, as the Federal cruisers are most dangerous to encounter. The instructions to commanders of blockade runners are to sink their ships rather than let them be captured by the Federals. Each blockade runner is well provided with boats, which can be lowered in a moment. These boats are provided with rowing and steering gear, and with ten days’ provisions. When there is no chance for the escape of the ship at night, the crew scuttle her and escape if possible to the boats; before the Federals can board the scuttled ship she is very often water-logged or sunk.—*London Times*.

The English Admiralty have decided that the names of persons serving on any rebel vessel who belonged to the Naval Reserve shall be stricken from the list, forfeit all privileges, and not be allowed to re-enter the service.

#### Foreign Cotton.

Messrs. Mill & Bros., of Manchester, England, calculate that the cotton supply from all sources for 1864 will be about 2,825,000 bales, giving for consumption 51,100 bales weekly. It is expected that India will supply about 1,800,000 bales. The high price of cotton has stimulated its cultivation in many countries where it was formerly raised in very small quantities. If the present war was over, and cotton cultivated in the Southern States at as low prices as formerly, India, Egypt and other cotton countries would scarcely be able to withstand the competition, and the United States would again become the cotton garden of the world.

#### MISCELLANEOUS SUMMARY.

**METALLIC FLAGS.**—Mr. A. Watson, of Washington, D. C., has recently introduced a new metallic flag, which is highly spoken of by those who have seen it. The inventor says;—“These flags are more beautiful than bunting, or even silk; and as they cannot be injured by the most violent storms of wind, rain, snow, or sleet, they will in the long run be twenty times cheaper than bunting. They will also answer the double purpose of a flag and a vane, and may be used as a sign. They are always thrown to the breeze, wind or no wind, and are literally nailed to the mast.”

**COST OF CULTIVATING LAND BY STEAM.**—A Mr. Smith, of Woolston, England, has published an account of the cost of cultivating land by steam for eight years, in which he says that the cost of preparing land for roots was, with steam, \$2 88; with horses, \$10 3; for barley two years, \$2 16 with steam against \$5 5 by horse power; four years for wheat, \$50 20 by steam against the same for horse power, and foots up a total for a number of other articles, which shows a gain of 200 per cent in favor of steam. The writer says also that besides the economy of the plan he had much better crops.

**STEAMBOAT ACCIDENTS.**—The number of persons who lost their lives or were wounded by steamboat accidents in 1863 was 255 killed and 85 wounded; but although this is an increase of such accidents over the previous year, it is pleasant to record that the number is small in comparison with most former years. Thus, ten years before, in 1853, there were 319 killed and 158 wounded, and yet steamboats have greatly multiplied since then. In 1860, there were 579 lives lost and 134 persons wounded. Steamboat traveling in the United States is becoming far more safe.

**A NOVEL SPECTACLE.**—New York is a great place for sight-seeing. Passing up Broadway one day last week we saw a crowd of about fifty respectable-looking men surrounding an object that lay stretched upon the ground packed in blankets. Upon inquiring into the cause of the excitement from one of the bystanders, we soon ascertained that it was caused by an old gray horse, who was just breathing his last. Such scenes of attraction are now quite common in New York.

The Montauk nation of Indians, once one of the most powerful in America, has dwindled down to five persons. Their monarch, or the monarch of four of them, Sylvester Phare, keeps no standing army, the smallness of his revenue obliging him to dispense with that kingly luxury.

**GREAT STEAMSHIP SPEED.**—The steamship *Scotia*, of the Cunard line, on her late passage from New York to Liverpool, made the quickest Atlantic trip on record. From New York to Queenstown, Ireland, the passage was but eight days. To the Mersey the time was but eight days and 21 hours, including stoppages.

The new French journal, *L’Aronaute*, which made its appearance a few weeks ago, is devoted to aerial traveling; its first part being ornamented with a very extensive engraving of balloons, parachutes, flying machines and other similar inventions.

The number of steamers inspected in the United States during the last fiscal year was 933, with a tonnage of 405,000 tons. The number of engineers licensed was 2,700. The number of boilers reported defective by the inspector was 55.

The government employes at Sheerness, England, who assisted in fitting out the *Rappahannock* for the rebels, have been discharged for violation of the neutrality law.