

## MISCELLANEOUS SUMMARY.

**THE "WARRIOR" LIGHTED BY GAS.**—The *Warrior* is undergoing a thorough examination in dock at Portsmouth. The *Times* says that many improvements have been recently made in the fittings of the vessel. Perhaps the one possessing the greatest novelty is the introduction of "ozone gas" into the engine room and screw alley. Two small copper reservoirs, holding about a quart imperial measure each, contain a supply of spirituous oil, which flows by a pipe, after the manner of a caged bird's water fountain, into a small copper-inclosed tray filled with sponge. Through this a stream of atmospheric air is blown by a pipe from a pump (the latter set in motion by a weight and pulley), which, passing out by a discharge pipe at the opposite end of the tray, goes direct to the burners. There it gives out a beautiful white light, with comparatively no heat. An apparatus for the supply of a dozen burners may be carried under the arm. It requires no gasometer, and its use entails no danger to the ship. It emits no smell when burning, nor does the vapor itself, when allowed to escape unburnt from the nozzle of the burner. Its use entails no attention beyond the winding up, once in 24 hours, of the small weight which sets the machinery of the air-pump in motion. Its cost is one-fourth that of the candles served out for use from the paymaster's stores of the ship.

A Glasgow paper announces "for sale by private bargain, the wonderful organ of James Watt, the illustrious inventor of the steam engine, made by his own hands for his own amusement, in the city of Glasgow, nearly 100 years ago."

The London *Mechanic's Magazine* says "the manufacture of American watches commenced within the last ten years in Waltham, as an experiment, has proved eminently successful. Unable heretofore to compete with the low-priced labor of European workmen, they perfected machinery by the aid of which watch movements are fabricated equal to the hand-made. The continued growth of this branch will diminish the importation of foreign watches, and may at no distant period earn for North America a reputation in this manufacture equal to that she enjoys in the kindred branches of clock-making. Gold and silver watch cases are now produced to a very large extent, chiefly in the cities of Philadelphia, New York, and Newark."

The new iron paddle-steamer *Will o' the Wisp*, 600 tons, and 180 horse power, was tried recently on the Clyde. The builders had engaged to carry 200 tons dead weight at the speed of 17 miles an hour, under a considerable penalty—the owners engaging to pay a premium of the same amount if the vessel exceeded that speed.—Mr. Wilkie, engineer, Glasgow, being appointed umpire. With the above cargo the vessel accomplished the distance between the Cloch and Cuabrae Lights in 52 minutes 11 seconds, being over 18 miles an hour; consequently the builders have won the premium. The *Will o' the Wisp* was designed, built, and engined by W. Simons & Co., London Works, Renfrew. Probably a blockade-runner.

**THE VAGARIES OF STEAM.**—The curiosities, so to speak, of boiler explosions, are well set forth in the following paragraph cut from an exchange:—"A boiler in a sawmill at Fort Wayne, Ind., exploded on the 14th ult., nearly destroying the mill. The boiler passed through a barn adjoining the mill, killing a valuable horse, then through another barn, killing a cow, then through two apple orchards, doing much damage to the trees. One of the flues was blown nearly a quarter of a mile. A piece of the boiler struck and upset a kettle in which a woman was boiling soap, without injuring her. Fortunately no one was seriously hurt."

[The cow might object to the conclusion.—EDS.]

**MERINO SHEEP FROM VERMONT** have just been shipped for Australia. They were sent for by sheep farmers in the "bush" as the best that could be found anywhere—a compliment to the farmers of the Green Mountains.

The new iron railroad bridge over the Ohio at Steubenville will be 1,890 feet long, have 8 spans 90 feet above the water, 4 of 225 feet, 3 of 310 feet and 1 of 820 feet. The aggregate weight is estimated at 28,335 tons or 5,670,000 pounds.

**COTTON.**—The great demand for cotton and the high prices paid for it, have led to increased efforts in its cultivation in various parts of the world, and with good prospects of future success. According to a recent estimate of Mr. Ashworth, an English statistician, India will yield 1,550,000 bales during the ensuing year, Turkey 40,000, Egypt 300,000 bales, China, Brazil, and the West Indies, 483,000; while America is credited with only 100,000 bales. Messrs. Whitworth & Brothers of Manchester, make a much higher estimate than this, however, and expect 3,165,000 bales from all sources. Cotton is of vast importance to the whole civilized world. For many purposes, there is no other material that can take its place; and besides this so much capital is invested in cotton factories and machinery that an intense self-interest is manifested to increase the supply, so as to set all the factories which have been idle, or partially idle, for about two years, in full operation again. It is believed that there are now about 300,000 bales in Western Louisiana and Texas, which would be secured to the trade were these sections of the Gulf States subdued. About 3,344,000 bales are required per annum for the British factories. There was a fall of one penny per pound on Indian cotton at Manchester on Nov. 17, making 2½ pence decline from the prices that ruled two weeks before.

**TRICKS OF WINE MERCHANTS.**—The London *Grocer* says:—"Wine merchants who have not been long in the trade will derive considerable information on the ways and customs of preparing ports, sheries, and other wines for the English markets, and in astonishment many will read that not a drop of port or sherry wine reaches market without a large admixture of brandy, and every Oporto wine-grower declares that port cannot be exported without spirits. It is scarcely possible for wine to continue for many years in contact with the crust and cork without being deteriorated in bouquet; and it is a well-known fact that almost every third cork containing very old wine is decayed, and has a bad smell, which it imparts to the wine. Port, with all its strength, when it has been in bottle twelve, fifteen, or twenty or more years, has generally what is known as the 'bottle stink'; yet, with this bottle stink, if declared to be a 'real vintage 1820,' ten guineas will be a small price for it."

**LOSS OF THE "ISAAC NEWTON."**—A most shocking accident occurred on the 5th inst., by which upwards of ten persons lost their lives, and which also resulted in the total loss of the steamer *Isaac Newton*, a vessel running to Albany. The boiler of this steamer gave way in some part, at present unknown, and by the escape of steam and expulsion of coals from the furnaces, killed and badly scalded a great many persons. The accident occurred early in the evening and fortunately a steamer happened to be near, which at once proceeded to the wreck from which the flames were bursting in every part and rescued the survivors. The scenes on board are said to have been appalling. The vessel was valued at \$200,000, and is a total loss.

**HUGE ARMSTRONG GUN.**—Recent British papers contain elaborate and highly-colored accounts of a new Armstrong gun of 13½ inches bore, 15 feet length, and weighing 22 tons, which was lately tried at Shoeburyness with conical cast-iron hollow shot weighing 600 pounds. The charge used for it was 70 pounds of powder. Twelve rounds were fired and the London *Morning Post* states that with charges of 75 pounds its range is about ten miles. It is a muzzle-loader. In all likelihood all the breech-loading Armstrong guns supplied to the British navy will soon be discarded, as their breech-plugs blow out and they are unsafe.

**HIGH-HANDED PROCEEDING.**—A party of rebels recently embarked on the steamer *Chesapeake*, running from this city to Portland, and while off Cape Cod, on the trip to Portland, overpowered the crew and took possession of the ship. The second engineer was killed and thrown overboard, and the chief engineer wounded. The rebels took passage from this city and were probably a set of desperadoes or adventurers, who could be collected here at an hour's notice for any undertaking. This affair shows that necessity exists for a strict watch to be kept at all times on vessels of every class.

**AERIAL LOCOMOTION.**—M. Jules Seguin has brought before the Parisian public a project for aerial locomotion between the Place de la Concorde and the Porte de la Muette, on Moreaud's system. According to this arrangement, the balloon will be held captive by means of a steel wire cable, running over vertical pulleys at the point of departure and arrival. These so-called pulleys are really large cylinders or drums on which the rope is wound backwards and forwards by means of a steam engine. To the cable which performs the functions of a locomotive, is fixed a line, which conducts the balloon; this is the general idea [of a system on which M. Moreaud has experimented with great success, employing small balloons. M. Seguin proposes to carry 250 persons at each trip, from the Place de la Concorde to the Bois de Boulogne, or about 600,000 persons per year.

**THE RIFLED MUSKET.**—In making the gages for the purpose of manufacturing the United States rifled musket, the Providence Tool Company worked up a set to nearly the size, but left a small margin to work off when they were to be tested by the standards at Springfield. The company hired a shop at Springfield, as they were not allowed to take the United States standards away, stocked it with men and tools and finished the gages at once up to the standard size required by the Government. In our article on this subject it was stated that the gages were sent back to Providence to be reconstructed; this was a misapprehension of the facts in the case, and should have been given as previously related.

**AN OLD HORSE-SHOE.**—An iron horse shoe has lately been exhumed in the diluvium at Abbeville, France, supposed to be a pre-Adamite deposit, and in which bones and skeletons of the Hudson's Bay beaver, elephant, &c., had been previously found mixed with flint arrow-heads. The flint implements were supposed to afford proof that man had existed in France long anterior to the period usually assigned for his advent—about six thousand years ago.

**MR. CANTON,** the President of the Medical Society of London, has been writing a volume on the *arcus senilis*, or old man's bow. This is a ring, or bow, or segment of a circle, which shows itself on the edge of the cornea or dark part of the eye, of which it is a fatty degeneration, and a never-failing symptom of bad health and a decaying constitution. The advantage of this discovery is, that persons having this symptom may pay proper attention to their health in time.

**SENSIBLE ENGLISHWOMAN.**—An accomplished English lady, in a recent contribution to *Fraser's Magazine*, says:—"If at any time I needed to find a gentleman who should aid me in my little difficulties of travel, or show me a kindness with that consideration of a woman which is the true tone of manly courtesy, then I should desire to find a North American gentleman. They are simply the most kind and courteous of any people."

**INCREDIBLE!**—We learn from a "truly educated" engineer abroad that "if very heavy engines with imperfectly fitted bearing surfaces are run at high speeds there cannot be the least doubt that they will break down." It is to be regretted that this important fact has been so long withheld from the engineering community.

SOME articles intended to be transmitted in the English mails, but which were not forwarded by the officials, are thus described by a cotemporary:—"Two canaries, a pork pie from Devonport to London, pair of white mice, leeches in bladder, bottle of cream, sample of cider, a roast duck, a loaded pistol, fish, reptiles, &c."

**MASSACHUSETTS PIANOS.**—The *Commercial Bulletin* states that the piano-forte manufactory of Messrs. Chickering & Sons, Boston, is "the largest building in the country, except the capitol at Washington," and that about fifty pianos are manufactured weekly at the establishment.

**WHO MAKES MATCH SPLIT MACHINERY?**—A number of inquiries on this subject have been made at this office latterly. Manufacturers of such machinery will do well to advertise in the *SCIENTIFIC AMERICAN*.

**LOUIS NAPOLEON** has ordered twelve light steam plows for the imperial farms in France. They will range from two to five horse-power.