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NEW YORK, SATURDAY, MARCH 14, 1896.

(Illustrated articles are marked with an asterisk.)

Aluminum, corrosion of 170 Gass horing (6738)...for New Guns, disappearing, for New York harbor'..... Heat in Australia, the Inventions, recently patented... Kidney, calculus in the...... Kite flying, experiments in^{*}... Lanterns, optical projection^{*}... Latitudes, big, reached.... 161 ... 170 ... 172 ... 165 ... 171 ... 165 ... 163

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Price 10 cents. For sale by all newsdealers

- netic relations of the earth and planets. III. AUTOCARS.—Mechanical Road Carriages.—By W. WORDY BEAUMONT.—Lecture I, continued.—Continuation of this import-ant series of lectures, with numerous illustrations of the older road carriages as an introduction to the modern art of motocycling.—
- 16846
- Inc what is practically a protographic shutter without lens.-8 il-lustrations... CHEMISTRY.-Apparatus for the Estimation of Sulphur in Iron. By E. J. READ.-Apparatus for determining sulphur by evolution from the metal treated with acid.-I illustration... Explosive Mixtures of Gases With Air.-A valuable paper on this important subject. V. 16844
- bis important subject. **ELECTRICAL ENGINEERING.**—The Air Chamber Trolley jonduit.—An underground trolley system on the diving bell prin-iple to secure the leads from interference by penetration of

NEEDED PATENT OFFICE LEGISLATION.

Year by year the lack of ample appropriations to provide a sufficient force at the Patent Office for the rapid conduct of business becomes more manifest and should lead all legislators interested in the welfare of their country and the progress of invention to regard this most useful branch of the government with liberal ideas of its needs. Inventors, we presume, as a rule. do not appreciate the power they might have in shaping good legislation for their interests by personally urging upon the respective representatives and senators from their sections of the country the necessities for more liberal laws regarding patents and the enlargement of the Patent Office facilities.

In view of the vast number of patents already issued and the increasing number of applications now being made each week. the new bill introduced in the House of Representatives and Senate at Washington during the present session, and known as a bill "To establish a classification division in the United States Patent Office." is most timely and is a step in a direction which will be of great service and utility to inventors in the future. It has the unanimous approval, not only of the officials of the Patent Office, but of every sincere friend of the inventor, and has been favorably acted Paullast month ran ashore at a point but a few miles upon by the committees in the House and Senate. We from its mouth, the Campania on the same occasion is hope there will be no unnecessary delay in its becoming a law, and that there will be no pruning of the amounts asked for.

The bill provides for the establishment in the Patent Office of a new division, to be called the "Classifica-(Established 1978) with which is mcorporated "LA AMERICA CIENTIFIC A INDUSTRIAL," or Spanish edition of the SCIENTIFIC AMERICAN Published monthly, uni-form insize and typography with the SCIENTIFIC AMERICAN. Byry num-her contains about 30 pages, profuely illustrated. It is the finest scientific, industrial export paper published. It circulates throughout Chug, the West Indies, Mexico Central and South America, Spann and Spanish pos-sessions-wherever the Spanish language is spoken. The SCIENTIFIC AMERICAN EXPORT EDITION has a large guaranteed circulation in all commercial places throughout the world. \$300 a year, post paid to any part of the world. Single conies, 361 Broadway. New York. MUNN & CO., Publishers, 661 Broadway. New York. MUNN & to Co., Publishers, 661 Broadway. New York. MUNN & to Co., Publishers, 661 Broadway. New York. MUNN & CO., Publishers, 661 Broadway. New York. sistant examiners, at \$1.600 per year; three third assist- 29, a fog spread over the waters of New York Harbor, ant examiners, at \$1,400 per year; and thirty-six fourth and an unprecedentedly bad record was made for the ists and messengers-in all equal to \$64,590. Each person is to be appointed by the Secretary of the Interior, upon the nomination of the Commissioner of in deep water and the French ship returning badly Patents, subject to the rules and regulations of the damaged. The George W. Clyde of the Clyde Line **Civil Service Commissioner.**

> countries, and of printed publications which constitute the field of search in ascertaining the novelty and patentability of applications for patents, together with such other duties having relation hereto as may be considered necessary by the commissioner."

Not only will the methodical and uniform classification of the letters patent issued by the United States printed publications; this certainly will be a great gain, by enabling inventors or their solicitors, when making searches in regard to the novelty of inventions, to do nel as if it were an avenue. so on an equal footing with the examiners of the Patfor the quicker disposition of applications.

We shall allude in a future number to another bill, in which several important amendments to the existing law are proposed.

A PHENOMENAL WIND STORM.

York and vicinity was very remarkable, and so far, mainshipchannel being the longest and most winding. March, which is considered the most blustering month In the daytime long lines of buoys, red and black, are number of miles traveled by the wind in New York and danger buoys also, so that once the long lane is City in February was 14,402, or 6,167 miles more than entered, it can be followed without the least trouble, in February, 1894, and 5,595 miles more than in the if the buoys can be seen. Until recently the lights on same month in 1895. This record is also 6,657 miles shore were the only guides that were maintained for more than in March, 1894. and 3,722 more than in the mariner's use at night. March, 1895. Local forecaster Dunn stated to our representative that the gale which struck the city on remarkable electrically lighted buoy installation Wednesday, March 4, made a new record for New which, in face of some opposition from the conserva-

Ferry, N. J., and similar accidents occurred elsewhere; men were also blown from boats. A platform was blown upon a track of a railroad and an engine was wrecked in consequence of running into it. Twe freight cars of the New York & New Haven Railroad were unroofed. Fences, windows and roofs in localities in the path of the storm suffered severely. But it was in New York City that the storm was particularly severe. Around the high buildings the wind raged and howled, making progress against it well nigh impossible. In some office buildings two men were stationed by each door simply to open it against the pressure of the wind. Some pedestrians were even thrown down, and one man was blown from his truck when the storm was at its height, and walking in the teeth of the wind was very exhausting. It was with difficulty that a hat could be kept on the head. On the whole, New Yorkers suffered one of the most unpleasant experiences since the great blizzard of March 12 and 13. 1888.

NEW YORK HARBOR.

The harbor of New York has recently been the scene of an unusual number of maritime disasters. The St. said to have narrowly escaped a like fate, and although the St. Paul escaped without structural damage, her wrecking bill must have been very large, and the loss of her services, due to detention from sailing, and the expense of dry docking, required by the underwriters before she could be admitted as a risk for insurance, represent a large sum of money. Her stranding was due to fog. But a few days ago, on Saturday, February disasters of a single day. On this particular day the French steamer La Bourgogne ran into the Atlas Line ship Ailsa, both outward bound, the latter sinking was run into by the Guyandotte of the Old Dominion "The Commissioner of Patents shall assign to this Line, and was beached badly damaged. Just below division the duty of preparing a philosophical classi- the Narrows the American Line steamship New York fication of the subject matter of all letters patent ran aground in the fog, backed off and worked along which have been granted in this and in the foreign slowly to again go aground more firmly than before, so that some days elapsed before she escaped. These were the principal disasters of a memorable day.

The number and variety of these disasters render the necessity of furnishing New York Harbor with the best available system of marine lighting an imperative duty. To procure a light that will be available during a fog is well nigh impossible. We show on anbe effected, but also the patents of foreign countries and other page the present system of lighting the channel, which is efficient for night service, and which, under ordinary conditions, serves to light up the chan-

The recent accidents that we have mentioned were ent Office, in addition to affording the latter facilities in no way due to any defect in the present system of lighting the harbor. as most of them occurred in the When such legislation is demanded by all conversant fog during the day time. There is much, however, with the needs of the Patent Office and is nrged by that remains to be done to prevent such accidents, not the officials connected therewith, there should be no only in the way of producing an efficient light for use doubt about its being enacted. The sooner the better. during fogs, but in furnishing vessels and lighthouses with efficient fog signals.

The main ship channel of New York Harbor pursues a particularly devious course. On Sandy Hook, on the mainland of New Jersey and on Staten Island there are established range lights and screens for en-The wind record for February in the city of New | abling the lines of the channels to be followed, the of the year, bids fair to sustain its reputation. The ranged along the sides of the channels, with channel

In the article on another page we describe the very York; for, at 12:40 P.M., the wind attained a velocity tive element, has been placed along Gedney's Channow

 VII. PHYSICSBlack LightAn interesting note on catbodic rays. By D'ARSONVAL, the great scientist	(6849) (6842) (6842) (6842) (6845) (6845) (6845) (6844) (6844) (6839) (6839) (6839) (6848) (6839) (6848) (6848) (6840) (6840) (6849) (6	twenty four hour record, as it is called—the wind trav- eled 1,147 miles (or about twice the distance traversed by an ocean liner in the same period, or more than a day's run of an express train); from noon on Tues- day, March 3, to noon of Wednesday 875 miles; and in the next twenty-four hours, 1.076 miles. This great northwest windstorm played havoc with various structures and with commerce and pedestrians. No sailing craft came into port by way of Sandy Hook, and the steam craft made progress with ex- treme difficulty. The health officer of the port of New York was not able to board the steamer Kaiser Wilhelm I at quarantine, and the vessel was compelled	makes the night run through the outer lines of the bar, where she is furthest from the range lights on shore, by a system of lighted buoys exactly compara- ble to street lamps. THE OLYMPIAN GAMES. In the month of April, historic Athens, the scene of so many notable athletic contests, will be invaded by the athletes of the modern world, and the sports of the ancient Greeks will be resurrected, and modern games will also be introduced. Two years ago, at the Paris Athletic Congress, it was decided to revive the "Olym- pian Games," which first took place in the year 776 B C., for it was then that the regular catalogue of Olympic victors begins. The Olympian Games were the greatest of the four Panhellenic festivals of the ancient Greeks. They were celebrated at intervals of
United States Commissioner CARROLL D. WRIGHT, with interest- ing statistics and table 1	16840 16854	Wilhelm I at quarantine, and the vessel was compelled to anchor. The ferry boats made their landings after long de-	ancient Greeks. They were celebrated at intervals of four years, in honor of Zeus, in a sacred inclosure in the plain of Olympia, a valley in Elis, Peloponnesus, Greece. The importance of the games was so great