

A SCIENTIFIC CURIOSITY.

New York's Building Within a Building That Interests Engineers.

New York has no place that is as interesting to engineers and students of engineering as the big cable building at the northwest corner of Broadway and Houston street, which is one of the power stations of the Broadway cable road. This is an eight story building, with a granite and brick front and an interior of steel, being really a building within a building. What makes the building a scientific curiosity is the fact that, though the ponderous operating machinery of the station is at work unceasingly night and day, its working does not produce the slightest jar or tremor in the building. There are 550 tons of machinery, all told, in motion when the cable works, including driving wheels, shafts and cable drums. The shafts of the driving wheels themselves weigh 50 tons each, and two of the driving wheels are 32 feet in diameter.

The machinery is 65 feet below the sidewalk level, and in itself is a wondrous sight to a layman. A visit to the power room makes plain at a glance how the engineers have solved the problem of eliminating the jar and tremor of the mighty steel power makers. The builders have simply reared the huge superstructure of stone and steel on great steel pillars that are nearly $1\frac{1}{2}$ foot in diameter. These pillars rest on a foundation of concrete and do not come in contact at any point with the foundations upon which the cable machinery is built. This latter foundation is a separate and distinct one of steel plates filled in with concrete, with big circular holes at different points. The foundation pillars of the building pass through these holes, and there is a free space of half a dozen inches all around between the pillars and the steel and concrete foundation.

Even if the giant machinery did jar, the jarring could not be communicated to the steel pillars of the building, and without such communication it would be impossible to produce a jarring of the walls. It is an equally astonishing fact to a layman that the machinery itself does not jar in the least. The mammoth shafts of the driving wheel beat the air and produce a sensation like thumping upon the ear drum of the visitor to the power house, but that is all.

If a visitor places his hands on the walls or the street columns, he can readily discover that there is not the slightest tremor of either walls or pillars. There is a big store on the ground floor of the building over the power room, and every one who goes in the store is amazed to find that the floor does not shake. The visitor can hear the machinery going below him, but he cannot feel any motion despite the enormous weight of the machinery.—New York Sun.

The Railway Signal Tower.

The signal tower, rectangular, with rows of windows on all sides, stood at the intersection of many branches. At this point the trunk line resolved itself from four tracks into two, and here the gravel track, which looked as if it had been laid by a palsied contractor, left the main line and respectability behind and hobbled out of sight behind the signal station with an intoxicated air. Beneath the tower, to the right, a double tracked branch tapped a fertile country beyond the sandhills.

And beneath the signal tower, to the left, a single tracked branch, only a mile long, brought South Sumach, one of those tiresome towns that manufacture on a water power, in touch with the middleman. This petty branch—as if the case

had been with petty people—made more trouble than all the rest of the lines put together. The signal men found this out. So Sumach junction had its place in the world, and perhaps it was a more important one than that of many a complacent and opulent suburb.

The heart of this little community did not center, as a thoughtless person might suppose, in the church or the commandery, or the grocery store, or the school, but in the signal tower. It was the pulse of the section. It was the life blood of thousands of unconcerned travelers, whose lives and happiness depended on the intelligent vigilance of three men. These three took turns up there in the tower, locking and unlocking switches and signals, until one might expect them to faint for dizziness and confusion.—Scribner's Magazine.

Origin of the French Theater.

Volumes innumerable have been written on the origin of the French theater, which had as humble a beginning as the theater in all other European countries, with the exception, however, of opera. The spoken drama of France, as of other European countries, had humbler beginnings, and the first regular troop of the Comedie Francaise had its origin in a combination of wandering companies. It is a little more than two centuries ago, in the year 1689, that the theater where "the comedians of the king" habitually performed received the title of Comedie Francaise, though its constitution dates from 1680, when, by order of Louis XIV, the company of the Hotel de Bourgogne was united to that of the Theater Guenegaud in the Rue Mazaria. The history of the Comedie Francaise cannot well be separated from that of Corneille and of Moliere, its greatest writers, though Moliere, who died in 1673, and Corneille, who died in 1684, produced their works long before the Theater Francaise was officially constituted.—St. James Budget.

Horsepower of a Whale.

An interesting study of the horsepower of the whale has been made by the eminent anatomist, Sir William Turner, of the University of Edinburgh, in conjunction with Mr. John Henderson, the equally eminent Glasgow shipbuilder. The size and dimensions of a great whale stranded several years ago on the shore at Longridy furnished the necessary data for a computation of the power necessary to propel it at the rate of 12 miles an hour. This whale measured 80 feet in length, 20 across the flanges of the tail and weighed 74 tons. It was calculated that 145 horsepower was necessary to attain the speed mentioned.—London Exchange.

An Egg Tax.

The state finances in Russia are recruited by a graduated income tax, commencing at 1 per cent on incomes between 1,000 and 2,000 rubles (a ruble equals 3s. 2d.), and increasing at the rate of one-tenth per cent on every additional 1,000 or fraction of 1,000 rubles. A duty of a quarter kopeck (about one-tenth of a penny) is also imposed on the eggs of all kinds of poultry, which tax on food realizes several millions of rubles.—Temple Bar.

The Dear Girls.

"There are no flies on Miss Hiland," said young Mr. Van Braam to Miss Manchester.

"No," replied the latter, who finds Miss Hiland a rival; "flies are not usually attracted by vinegar."—Boston Globe.

Mrs. Inchbald.

She was very beautiful, and gifted with original genius, as her plays and novels testify. She was not an actress of special merit, but of respectable mediocrity. She stuttered habitually, but her delivery was never impeded by this defect on the stage. Mrs. Inchbald was a person of a very remarkable character, loving, poor, with unusual mental powers, and irreproachable conduct.

She had a singular uprightness and worldliness and a childlike directness and simplicity of manner, which, combined with her personal loveliness, and halting broken utterance, gave to her conversation, which was both humorous and witty, a most peculiar and comical charm.

Once, after traveling all day in a pouring rain, the dripping coachman closed her his arm to help her out, when she exclaimed, to the great amusement of her fellow travelers: "Oh, no, no! Y-y-y-y will give me my death of cold! Do bring me a-a-a-a dry man." Coming off the stage one evening, she was about to be taken down by Mrs. Siddons in the greenroom, when suddenly, looking at her magnificent neighbor, she said: "No, I won't associate with you. You're t-t-t-too handsome!" in which respect she certainly need have feared no competition, and less with my own than any one, their style of beauty being so absolutely dissimilar.—"Records of a Girlhood," Fanny Kemble.

Not a Lost Art.

Archæologists and antiquarians in their writings frequently refer to the manufacture of flint arrowheads, etc., as a lost art. That is a great mistake. The art is probably lost to the Indians because they have no use for it. The stone implements have given place to those of iron and steel, and the rifle and revolver have supplanted the flint ax and arrowhead. The art of making them is not lost, however. There are many collectors of relics of the aborigines who have studied the art of working in flint and have become adepts. In Chattanooga a gentleman has become so proficient in the art that he has not only manufactured magnificent specimens of arrowheads from flint, but also from the far more brittle obsidian, and even from ordinary glass.—Chattanooga Correspondence.

From Earth to Moon.

What is the smallest light on earth that would be seen on the moon? We will suppose that the sun has set a place on this side of the moon; the earth then appears as a thin crescent of light, and the light which is to be noticed is placed in the dark portion of the earth. Now, an arc lamp of 400 candle power with suitable reflector can be seen plainly at a distance of 20 miles on the surface of the earth on a dark night. If there were no absorption of the light by the atmosphere, it would be seen plainly 30 miles. From these data, and remembering that the mean distance of the moon from the earth is 240,000 miles, we easily find that the light must be 28,000,000,000 candle power.—Yankee Blade.

The Contrasts of Life.

It seems odd to read of a church official vested in a magnificent cope of cloth of silver, with a golden miter on his head, marrying a couple who knelt upon beautiful white satin prie-dieux near the altar, while other people, poverty stricken to the very verge of desperation, begged pennies on the sidewalk in front of the stately edifice.—Joe Howard.

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