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## Profusion of Life in the Ocean.

Not a shell or a stone is brought up, but is thronged with living beings. Every branch of weed gives shelter to multitudes of creatures—some temporary lodgers, some permanent residents. Life is parasitic upon life. The *surpula* builds its stony case on the abode of the shell-fish, and the delicate lace-work of the moss coral overspreads the *surpula*. Over the stem of the sea-weed creeps the graceful plumes of the zoophyte spring. These, again, are thickly invested by the pretty cells of many smaller species; and they, in turn, minute as they are, often bear in profusion the curious forms of microscopic animalcules. Let us take a stone from the heap that is lying in our boat. It is a perfect museum in itself. It is richly colored in parts by the *nullipore*—one of the lowest forms of vegetable life, which does for the scenery of the ocean what the moss and lichen do for the scenery of the upper world. Here is a circular cluster of cells, "looking like beautiful lacework carved in ivory;" here a little saucer of the purest whiteness, containing within it a number of stony tubes, the habitations of a whole company of tiny polyplous. A sponge overgrows one portion of the stone, itself the home of many a living thing; a sea anemone has possession of another. The little encrinure is present, and near it a small starfish. There are worms, too, in plenty, and more of life and beauty besides than we have space to describe. It is pleasant to think of the amount of happy existence which a single stone may support. The forms to which we have chiefly referred are visible to the unassisted eye; but as Humboldt remarks, "the application of the microscope increases in the most striking manner our impression of the rich luxuriance of animal life in the ocean, and reveals to the astonished senses a consciousness of the universality of being."—[Ex.

Mr. Simon said, at a recent meeting of the Society of Arts, London, that it was a notorious fact, that the great amount of blindness among compositors arose from the want of chimneys to their lamps. Such a statement seemed to him to be totally inconsistent with an age of civilization. That simple remedy should be published far and wide, and when once clearly known compositors' would no longer tolerate the old system.

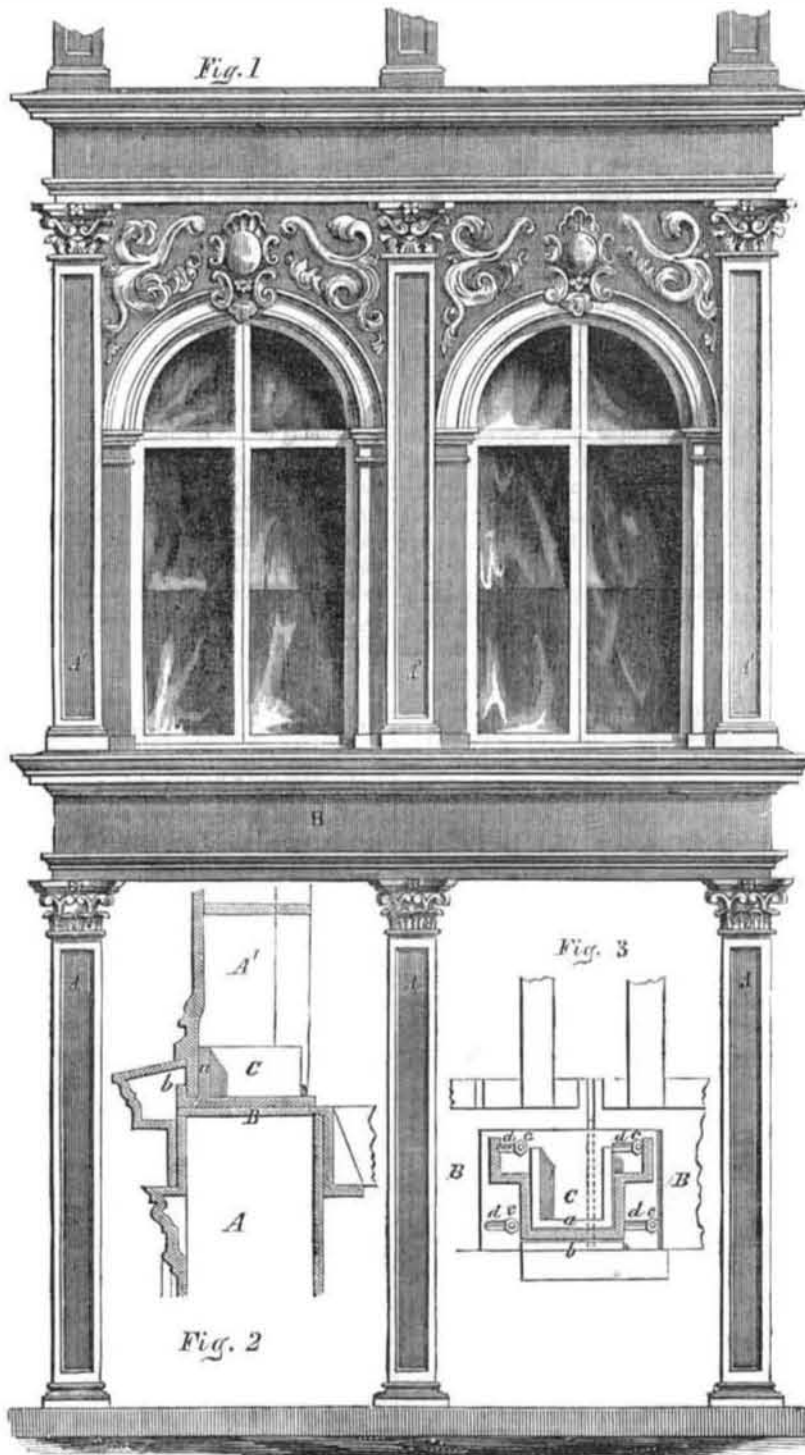
## A Toad Insulated.

One of the operators of the House Telegraph, states that while repairing the telegraph wires at Fairfield a few days since, a live full grown toad was found under the glass insulator, on the top of a pole, which was a chestnut, perfectly smooth, twenty-five feet high, and not near any tree or building.

## Crawford, the American Artist.

Late German papers contain the intelligence that Crawford, our eminent countryman, has been elected, on motion of the King of Bavaria, a member of the Munich Royal Academy of Fine Arts. This is the first American artist, we believe, who has received this distinction.

## IRON HOUSES.



The annexed engraving illustrates an improvement in the construction of iron buildings for which a patent was granted to Charles Mettam, Architect, No. 18 City Hall Place, this city, the 11th of last month. The front of an iron building constructed according to this improvement is here represented—fig. 1 being the second story, as it would appear when finished; fig. 2 is a transverse vertical section of the improvement claimed; and fig. 3 a plan view of the same. Similar letters of reference indicate like parts.

A A A represent the columns of the front of the lower story of a building; and B B the breast summers resting upon the columns in the usual way. C C are the chairs upon which the upper columns, A' A' A', are erected, which consist each of a broad flat plate, as large or larger than the base of the column, with a perpendicular piece, *a*, of such form as to fit to the interior of the column, and another perpendicular piece, *b*, fitting to the front or other part of the exterior of the column. The pieces *a*, and *b*, prevent the column moving upon the chair. The chairs are placed upon any part of the breast summers that may be desirable, and

are secured thereto by bolts and nuts, *c c*, for which slots, *d d*, are provided in the chairs, so that the chairs may be adjusted sideways, and so that when a chair rests upon the ends of the two breast summers—as it will when the columns of the upper tier are to be placed over the lower one—the longitudinal expansion or contraction of the summers may be allowed. Before proceeding to erect the columns, A' A' A', the chairs should severally be adjusted to the required condition, and may be secured before their respective columns are erected.—This method of erecting the columns upon chairs saves much labor, as the chairs may be adjusted exactly in the required positions before the several columns are raised, and the columns may be set up in their place at once without any adjustment. Much labor is thus saved, as the adjustment which is necessary to bring a heavy column to a desired position, is dispensed with and the adjustment of a comparatively light chair only rendered necessary.

An iron building on this plan is now in the course of construction on the corner of Courtland street and Broadway, which deserves the examination of all those interested in such

structures. Houses on this principle can be erected with astonishing celerity, as the parts to be hoisted are very few and can be set with ease, dispatch, and precision. This method of uniting the different stories prevents vibrations, from story to story, as is the case with more rigid structures.

Cast iron buildings are becoming more common among us, and if the price of iron was reduced to one half its present cost, there can be no doubt but that for every one now erected there would be five. With improvements in the manufacture of iron, we yet expect to see it greatly reduced in price, and then our people will have cause to rejoice in the substitution of iron for stone and bricks. The streets of New York are oftentimes rendered perfect Babels of confusion with mountains of mortar, marble, stone, and brick; all these would disappear if iron were substituted for them, as a building material.

More information about rights &c., may be obtained by calling upon—or by letter addressed to—the patentee, at his office named above.

## Tempering and Grinding Steel.

MESSRS. EDITORS.—In the "Scientific American" of the 15th inst., under the head of "Recent Foreign Inventions," you notice Mr. Chesterman's improvements in tempering and grinding steel, &c. Now so far as the improvement in grinding and polishing steel and other metallic articles are concerned, Wm. Southwell, of Kensington, is justly entitled to receive the honor, he being the first inventor of those improvements, and for which a patent was granted to him on the 4th of May, 1852. A machine constructed by Mr. Southwell for grinding circular saws of the largest size, will be in operation shortly, when the public will have an opportunity of judging of the merits of his invention. I may also state that a model of a machine built by him, for grinding long saws, was examined by one of the first saw manufacturers from Sheffield, during a visit to this city last year. This model, having two grindstones, with suitable means for adjusting the same, ground and polished both sides of the saw at one time. J. E.

Philadelphia, July 24, 1854.

## Spontaneous Combustion—A Warning to Manufacturers.

MESSRS. EDITORS.—I noticed not long since in the "Scientific American" your article on spontaneous combustion in cotton and woolen waste. I had not doubted that such combustion would occur, but was much surprised and alarmed a few days since to find how rapidly it would come on. Our wool cards were cleaned out in the morning and the waste or cleanings swept into a corner instead of being removed as usual. The whole pile of waste could have been easily pressed into a half bushel measure, and did not attract my attention until 2 o'clock in the afternoon, when in searching for fire which we knew existed in the building by the offensive smell, we discovered the waste to be on fire—burning actively after a lapse of about 8 hours. I attribute the rapid combustion to the presence of a handful or two of woolen waste which had been used in wiping down the card frames, where we were using oil of a very inferior kind, on the journals, although purchased at the price and having the appearance of the finest sperm oil. Let all beware of bad oil and oily waste. Yours, JAS. A. HARPER.

Lenoir, N. C., July 12th, 1854.

Many fires are now raging in the sparsely populated sections of New England. The prolonged absence of rain has caused the woods to be unusually dry and inflammable.