

Science and Art.

Rather Extraordinary

We find the following paragraph in an exchange:—

"Animalcules have been discovered so small that 1,000,000 would not exceed a grain of sand, and 500,000,000 would sport in a drop of water; yet each of these must have blood-vessels, nerves, muscles, circulating fluids, &c., like large animals."

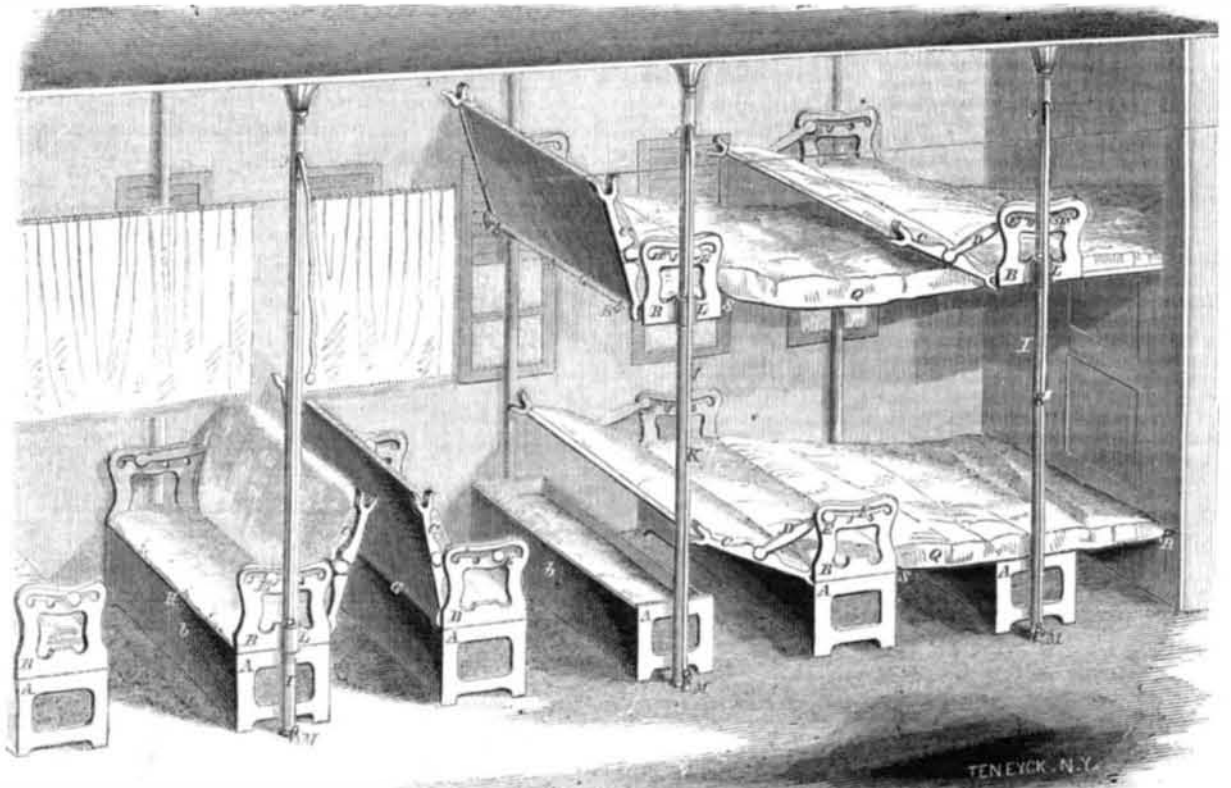
That there may be creatures endowed with life as small as this, we do not deny, for no one can place a limit to the creative powers of Omnipotence, and as His works are vast beyond our comprehension, so they may be too minute for our observation. But we doubt this discovery, for the reason that there is not a microscope in existence that could define the five-hundred-millionth of a drop of water; and it stands to reason that if the animalcules can not be seen, they can never have been discovered. But, says the paragraph, "they *must* have blood-vessels, &c., like large animals," thus showing that the writer of it is in that blissful state, called ignorance, concerning comparative physiology, like the gentleman who defined a crab as "an amphibious fish that walked backwards." There are plenty of animals, *i. e.*, beings endowed with sentient life and having the power of moving from place to place, which have no lungs, blood-vessels, or the like. Living beings, when resolved into their simple elements, are found to be made up of a series of cellular corpuscles, each having a central spot and surrounding matter; and there are some animals that live and move and have their being, which seem to be nothing but isolated corpuscles floating in the world of waters, waiting for some kindred cells to make up a larger body. Such is the *Ameba Princeps*—a jelly-like mass—that moves by altering the shape of its body, which it does by mere volition, as it is without muscles and the similar contrivances by which the will acts upon the higher bodies of animals. The *Ameba* feeds by rushing at some piece of matter smaller than itself, and wrapping its body around it, it absorbs it into itself. The *Infusoria* are nearly all of this character, and the names of their species is legion.

So that it seems there is no *must* about it, and the author who wrote the above paragraph needs to read and observe a little more before he ventures into the domains of natural history or attempts to describe the wonders of the forms of life.

The Filling-up of Harbors.

It is customary for geologists, in estimating the age of this globe, to base their calculations on the formations of deltas—the deposits of rivers—such as the Nile and the Mississippi. They take the thickness of the deposit made yearly as the radical of their estimates, and from this assume that it required myriads of years for all the principal deltas in the world to be formed. If the deposits of rivers were uniform, such conclusions would be inevitably correct, but the fact is, that in some seasons, as much sediment will be carried down in a few months as in others during centuries. A circumstance of this character has just taken place in the harbor of Greytown—the port so celebrated for its filibustering notoriety. The San Juan river flows out to the Atlantic in this harbor, and was formerly of a depth suitable for the largest men-of-war and steamships. Two months ago, the entrance to it was thirty-six feet deep, now it is only eighteen. The whole harbor is rapidly shoaling up, and where American steamers anchored in five fathoms of water four years ago, row-boats now get aground, owing to the vast deposits of weeds and mud. Vessels which formerly found an easy entrance are now compelled to anchor outside, and there is every prospect of this once excellent harbor becoming a lagoon in the course of a very limited number of months.

SIBBET'S RAILROAD SLEEPING CAR.



While traveling or pleasure is an agreeable change from a person's ordinary avocations, yet locomotion gradually loses its charm, and becomes labor in the severest sense of the word, especially by railroad, where the body has to be kept in one position for a thousand miles or more; and one of the great advantages of a sleeping car is, that it allows of a change of position at the proper time, thus rendering a long journey less tedious and more pleasant. From this cause railroad companies adopting sleeping cars are more likely to increase their traffic than those who neglect to obtain the use of this improvement.

Our illustration is a perspective view of the arrangement invented by J. W. Sibbet, of Cincinnati, Ohio, and patented by him Nov. 2, 1858. It is shown arranged for day and night, and the backs are reversible.

The seats, A, are made with sides, B, to form boxes, in which the bedding can be placed in the daytime. The tops of the seats, H, are attached to the arms, B, and each alternate seats is provided with a socket, L, by which it can slide up and down the upright or pole, I, being drawn up and sustained by the band, K, that passes over the pulleys, J, and that can be secured to the catch, M. There are also catches in I to sustain the bottom of the seat, and to relieve the bands of the weight of the persons who are laying on the top couch or berth. Each arm is provided with a notched groove, F, in which is a pin, E, of a rod, D, connected with the center of the back, by which the back can be sustained at any angle, the flared notches in its end-pieces fitting on a bar, G, that acts as a fulcrum to the back, and also a support. The car is changed to accommodate the occupants in a sleeping posture by elevating every alternate seat, and unrolling the bedding, Q, hooking one end on hooks R, on the back of the forward seat, and hooking its other end to hooks S, on the seat under which it was stowed away. The bottom seats are made into beds without being elevated, and the end top one is given sufficient length by doubling down the top of the water-closet partition, and placing the bedding over that. To save room, the back of each seat when forming a pillow projects over the foot of the bed behind it.

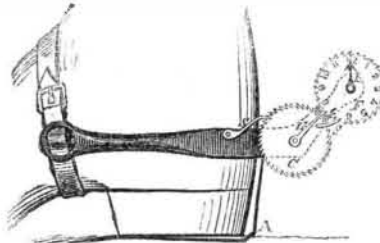
This car will admit of the same number sleeping as sitting, and as the whole change can be quickly effected by the passengers themselves, they can sleep or sit as suits them, there being no necessity to change all the seats at once. Curtains are provided to secure

privacy, and the whole forms an excellent arrangement for the intended purpose.

The inventor will furnish any further information upon being addressed as above, care of S. T. J. Coleman.

Herring's Pedometer.

"Oh dear! I'm so tired, I've walked goodness knows how many miles to-day." This is a very common expression, and it is really a pity that for accuracy's sake the person who makes it does not carry a pedometer to measure the distance which he has perambulated. The pedometer is eminently useful to the traveler, for it enables him to know exactly the distance from place to place, and if he be traveling in a new country he can record it with certainty for the benefit of following wanderers; but it is not carried by many because of its cost, which is rather high, and its construction is somewhat complicated. The one, however, that we illustrate, invented by B. S. Herring, of Portsmouth, Va., is simple and cheap, and is attached to the heel of the shoe or boot, like a spur (for which purpose it can also be used), as shown.



A is a spring which, in the act of walking, operates the wheel, C, that also moves the wheel, F, by an arm, G, that is attached to it. S S are ratchets to prevent the wheels going back. There are 50 teeth in each wheel, and the wearer must in consequence take fifty steps before C will make one revolution, and two thousand five hundred steps before F makes one revolution. Supposing the wearer to start with the hand, I, indicating 12, he will have to step that number of times before it will again indicate the same number; having once measured the distance that is walked in one revolution of F, it can easily be told how much ground has been got over in a given space of time, if the wearer has a watch also, and by observing the number of rotations, the distance between any two points may be measured.

The inventor will furnish any further particulars of this remarkably simple and ingenious device.

The Dudley Observatory.

Professor Mitchell, the distinguished astronomer, has accepted the post of Director of the Dudley Observatory. The event is regarded as a happy close of the Observatory troubles, and is hailed with satisfaction by the citizens of Albany. He will divide his time between his present position at Cincinnati and his new one.



INVENTORS, MILLWRIGHTS, FARMERS
AND MANUFACTURERS.

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