ing by the Native Guano Company. This process has been in operation at Aylesbury for eight years, at a net cost to the town of 250*l.* a year. This town differs in regard to its sewage from other towns of a similar size, in the enormous quantities of waste liquid from tanneries. The sewage is all concentrated into one point, is pumped into a reservoir, mixed with blood, charcoal and clay, and precipitated with sulphate of alumina; the precipitate is allowed to settle completely, and the supernatant fluid, perfectly colourless, is supposed to be in a condition to flow into a river without polluting it. The precipitate is dried and worked up into a saleable manure.

DAMP CELLARS AND HOW TO PREVENT DAMPNESS IN THEM.

The time will probably come when there will be no such thing as a cellar under a dwelling house, when houses will be built up on arches, with a free circulation of air under the floors. In the mean time the best must be made of the cellars. The best remedy for damp cellars is, undoubtedly, to have the soil under and around the house deeply underdrained. The drains or tiles should be two or three feet at least below the floor of the cellar, so that the standing soil water could not reach the floor. This plan should always be adopted when possible.

A correspondent inquires of the editor of the *American Architect* (*Scientific American*) what remedy he would suggest for curing a damp cellar.

The difficulty to be overcome in a new house is the wet cellar. Conditions present, concrete not strong enough to resist the hydraulic pressure through a clay soil. No footings under wall (which are of brick). No cement on outside of wall. The water evidently, however, forces its way through the concrete bottom.

(*a*) Will reconcreting (using Portland cement) resist the pressure of water and keep it out?

(*b*) If not, will a layer of pure bitumen damp-course between the old and new concrete do the work?

(*c*) Will it do any good to carefully cement the walls on the inside with rich Portland cement, say 3 feet high, to exclude damp caused by capillary attraction through the brick wall?

In reply to the above queries the editor gives the following hints, which are equally applicable to builders of new houses as to those occupying old houses with damp cellars:

It is doubtful whether even Portland cement concrete would keep back water under sufficient pressure to force it through concrete made of the ordinary cement. The best material would be rock asphalt, either Seyssel, Neufchatel, Val de Travers, Vorwohle, or Limmer, any of which, melted, either with or without the addition of gravel, according to the character of the asphalt, and spread hot to a depth of three quarters of an inch over the floor, will make it perfectly water tight. The asphalt coating should be carried without any break 18 or 20 inches up on the walls and piers, to prevent water from getting over the edge; and if the hydrostatic pressure of the water should be sufficient to force the asphalt up, it must be weighted with a pavement of brick or concrete. This is not likely to be necessary, however, unless the cellar is actually below the line of standing water around it.

This, although an excellent method of curing the trouble, the asphalt cutting off ground air from the house, as well as water, will be expensive, the cost of the asphalt coating being from 20 to 22 cents a square foot; and perhaps it may not be necessary to go to so much trouble. It is very unusual to find water making its way through ordinary good concrete, unless high tides or inundations surround the whole cellar with water. If the source of the water seems to be simply the soakage of rain into the loose material