THE AMERICAN PRESBYTERIAN. THURSDAY, SEPTEMBER 7, 1865.

Scientific.

MORTALITY IN ENGLAND.

The mortality of men in towns demands a careful investigation. At 45-55 the mortality of London men is not far from double that of men in the healthy districts of the country. It is much higher at every age than the mortality of women in London. Ill-ventilated workshops may have something to do with this, and so may indulgence in spirits and other stimulants. The workmen in all large towns suffer as much as, and often more than, the workmen of London. For instance, at the age 25-35, and again at the age 35-45, and again at the age 45-55, the workmen of Liverpool, Manchester, Bristol and Newcastleupon-Tyne, die at a still greater rate than the men of London. In the ten years 1851-60, the deaths in thirty large town districts of England, with an aggregate mean population of 2,541,630, comprising seven London districts and the principal provincial town districts, averaged 71.194 the priesthoods of old, by Druids, hieroa year, while the deaths at the rate in healthy country districts would have been only 38,459—an annual loss of above 32,000 lives in much less than a seventh of the population.

If the mortality of all England is arranged in five great groups, the following result appears. Where the mortality was fourteen, fifteen, or sixteen, per 1,000 persons living, the population was only eightysix to the square mile; where the mortality was seventeen, eighteen or nineteen, the population was 172 to the square mile; where twenty, twenty-one or twenty-two, 255; where twenty-three, twenty-four or twenty-five. 1,128; and where twenty-six and upwards, 3,399. Yet there can be no doubt that mere proximity of dwellings does not necessarily involve a high rate of mortality. If an adequate water supply and sufficient arrangements for drainage and cleansing are secured, the evils which make dense districts so fatal may be mitigated. It is remarkable that some of the dense districts of cities are already comparatively salubrious. The mortality of a district is by no means bound to its density of population. Bermondsey is less densely terranean to the Dead Sea has been per-inhabited than St. James, Westminster, but the mortality is considerably greater. Next to each other in these tables stand Westminster District (St. John's and St. Margaret's) and the district of St. George, Hanover Square, with equal density of population in each, taken as a whole; but the former has a mortality far heavier than the latter. It is also to be noted that in London the mortality fell from the annual rate of twenty-five per 1,000 in the decennial 1841-50 to twenty-four per 1,000 in 1851-60. The mortality of Lancashire and Cheshire also declined from twenty-seven to twenty-six. Taking all England, though the growth in numbers, of course, increased the density of population, the rate of mortality did not increase, but continued at twenty-two per 1,000.-London Gazette.

THE FROZEN WELL.

One of the most remarkable facts known in Brandon, Rutland County, Vermont, in which ice is found all the year round. The writer visited it in the summer of 1860, and learned that in digging for a farm well fixed at one thousand two hundred and in the fall of 1858, before cold weather ninety-eight feet; and as we know that commenced, frost was found in the ground feet, where water was found in sumclent in the usual way, and the frost manifested itself immediately on the stones from the surface of the water about twenty feet upward. Very soon it was seen that a well of ice was formed, adhering to the stone wall all around, and from the surface of the water to the bottom of the well, several inches thick-and this has remained frozen ever since, summer and winter. In the coldest part of the winter the water freezes over the whole surface, and frequently so hard that it is necessary for some one to go down and break it to procure water. The last winter almost the entire water in the

ANCIENT AND MODERN ENGINEERS. In some respects the ancients certainly eclipsed us conceited moderns. Our engineers gape at their monoliths, their Cyclopean walls, their pyramids, and the ruins

of such temples as those of Luxor and Baalbec, and ask each other how they were reared. What contractor of our time, especially if debarred the use of steam power, would undertake to quarry those obelisks of hard red granite, to carry them for vast distances, and to set them up, without chip or flaw, in the market place? What masons now could build such giant walls, without mortar, lead, or iron clamp, every monstrous stone accurately polished and fitted so closely that a knife cannot pass between the blocks? Above all, how were the dolmen and menhir reared by the rude Celtic nations, untaught by Rome or Greece? And by what prodigy of toil or adroitness did half-clad barbarians set up the astounding monuments of Stonehenge and Karnac? It is probable that we underrate the amount of science possessed by phants and Magi. The relics of what their serfs did under their direction sufficiently prove that the clerical architects knew their business thoroughly. In turning a river, in cutting navigable canals, in opening

mines, they showed no mean knowledge of statics. Their principal undertakings were such as we cannot approve; but of their ealously guarded acquaintance with sundry of the exact sciences, there can be little doubt. By dint of rollers and pulleys, of guys and cranes, by harnessing crowds of men and oxen to the lumbering slabs and shafts, by digging away the earth that had supported solid scaffolding for the support of the stones, they erected the granite gave some of the results of his observa-Anakim, at which we can but marvel.

THE LEVEL OF THE DEAD SEA ASCER-TAINED.

A party of royal engineers, under the command of Captain Wilson, set out in September last to make a survey of Jerusalem, and to "level" the country from the coast to that city, and thence to the Dead Sea valley. The levelling from the Medipendent observers, and with such nicety that the result can be relied on to within three or four inches. Meanwhile bench marks have been cut upon rocks and buildings along the line followed, and traverse surveys have been made, so that the work done may become the basis of more extended geodesical examinations of the interesting country toward which Christendom is turning with new and serious interest. The issue of these careful observations is to show that on the 12th of March, 1865, the Dead Sea lay one thousand two hundred and ninety-two feet below the Mediterranean level; which, if it proves that our old estimate was slightly in excess, singularly confirms the calculations by barometer of the Duc de Luynes and Lieutenant Vignes, who set it at one thousand two hundred and eighty-six feet on the 7th of June. 1864. At this season of the winter freshstand two or three feet higher, and in the fiercest heats of summer they are again lowered six feet by evaporation. Thus the greatest depression of the Dead Sea is now

- A cut recently made for the Dighton the nadir hives. By these methods the and Somerset Railroad, through a quarry in bee master saved his bees, and obtained North Raynham, Mass., struck a layer of honey greater in quantity and purer in peculiar white rock and lots of antediluvian quality. He thought that any one living trees, shrubs and vertebra of extinct monsters. One of the trunks of the trees bore year by keeping bees, so that a cottager plain marks of an axe.

-The French correspondent of the New that there had been quite a panic in the southern part of France, about the development of silk manufacture in the United States. It was reported that American agents had lately been making arrangements with a number of the best silk-workbees, who all knew him, and therefore would ers of Lyons to go to the United States, to put looms in operation. "This announcenot sting him. ment," we are told, "shook the empire, to use a strong phrase, to its very centre, for if there be any one industry more than another on which the French pride themselves, and on which reposes the wealth of buys the largest proportion of silk of any other should enter successfully into competition in this important industry, the blow would be a most fatal one."

Rural Economy.

A MINISTER AND THE BEES.

Dr. Cumming, of London, spends his summer vacation in a country cottage, and finds recreation from mental toil in a careful study of nature. He has interested himself in watching closely the habits of bees, and in a recent lecture in London tions. We find these extracts in a London paper: The lecturer commenced by explaining

why he had chosen this subject, and how he had acquired his information. He was in the habit, with his wife and children, of going down to a cottage in Kent, in the summer months, and as it had been wisely said the bow must not always be bent, he had sought out amusement in hours that he could spare from those duties which devolved on him as a minister, and he had found that amusement in studying the hive; and the result of that study was the observations which he would lay before them. At his cottage he had nearly a dozen hives; some of them had glass windows, and some had not. Frequently during the day he sat by these hives, listened to the music of the inhabitants and watched their habits, and jotted down such observations as occurred to him. The lecturer proceeded to describe the inhabitants of the hive. There were not three different kinds of bees, but three species of bees in the same hive-the the working bees. There were the bees that collected the honey, bees that collected flower

He could take any of his bees in his at the heart, even at the commencement of and without any fear of their stinging the disease. The bowels are sometimes torpid at the him; but if a stranger went near, the guard at once suspected him, and imme- outset, but diarrhœa, leading to dysentery, ninety-eight feet; and as we know that diately flew at him. The sentinels relieved | mostly follows, the evacuations being slimy, Lieutenant Lynch found a depth of one each other at intervals, mounting guard liquid and of a dirty yellow color, occaabout twenty feet below the surface, and thousand three hundred and eight feet the ground was frozen to the depth of forty opposite the Wady Zerka-Maia, we are watched, it would be found that those who likewise present as a rule. Slight tremors were appointed as ventilators came to the of the muscles of the shoulders and thighs mouth of the hive, four or five at a time, are to be observed in some cases, and so and using their wings as fans, kept up a also in an emphysematous condition of the current of air, so that the other workers skin along the upper part of the back. In labored in a moderate temperature. It was milch cows the secretion of milk is quickly a curious fact, and well worthy of notice, arrested, a remarkable diminution in the that if a bee-master, in order to ventilate quantity taking place as one of the early inthe hive, made a hole in the top, the bees dications of the attack. As the disease adimmediately closed it up. From this it vances towards a fatal termination, the would seem that the bees knew that fresh prostration of the vital powers becomes air was essential to healthy life but that more marked, the breathing short, quick, draught was pernicious. and more painful, the alvine evacuations In describing the queen bee, and the foetid and more slimy, and the surface of great deference and attention paid it by the the body deathly cold. The animal will other bees, the reverend doctor said that he sometimes sink as early as twelve hours had observed that the bees were very fond from the commencement of the attack, but of strong drink, and especially rum sweet- in many cases the disease will be protracted ened with sugar. On one occasion he to the fifth or sixth, and occasionally to the found the bees in one of his hives declin- eighth or ninth day.

in the country might make £8 or £10 a might thus pay his rent. He enumerated the enemies of the bees-the wasp, the York Times, in a recent letter, mentioned spider, the tomtit, the snail, and the moth. that there had been quite a panic in the The greatest enemy of all, however, was man, when he obtained the honey by using sulphur. In speaking of the excellent memory of the bee and its affectionate nature, the lecturer said that he might, in the summer time, be frequently found covered with his

THE CATTLE PLAGUE.

A terrible disease among the cattle has appeared in and around London In many the country, it is on the manufacture of of the cow-houses in the city the whole of silk. To touch this manufacture is to the stock have been carried off; in others touch a vital point; and if the nation which most of the animals have died or have had to be killed, to prevent the disease spreading. Professor Gamgee says it is the Russian cattle plague, and adds that the infection has no doubt been brought to this country by some foreign cattle. Those who are importing cattle should be on the

watch against this disease, which seems to be different from and more destructive than the one introduced into Massachusetts a rew years since. The following are said to be the symp-

toms :---Variations in the earliest indications of the disease will be manifested, these depending somewhat on the severity of the the sentiments of sacred song and to kindle, in pious attack, but more especially on the circumstance as to whether the digestive or respiratory system is the chief focus of the malady.

cceptable

ongregation.

Hymns given, we find those that are loved in the

churches. . . . We hall with satisfaction a book so well selected and so well arranged."

Presbyterian Publication Committee,

No. 1334 CHESTNUT STREET,

PHILADELPHIA.

Sewing Machines.

- - 1 25

SHEEP.

As soon as the affection declares itself, the animal ceases to take any kind of food, and in most cases even refuses water. Rumination is suspended, and the animal stands with its head drooping and the ears drawn back. If made to move, it shows great prostration of strength, and frequently staggers, as if about to fall. The skin is hot in places, and often remarkably so be tween the limbs, the hind ones in particular. An exudation early takes place from these parts, and is succeeded by crack and sores. The hair is staring, especially along the upper part of the neck, shoulders, and back. The extremeties are cold, even at the commencement of the disease, and in a latter stage the increased heat of the surface of the body gives place to a remarka-ble coldness, especially along the course of the spine. Tears trickle from the eyes, which are

red and expressive of suffering, and a watery discharge flows early from the nosqueen bee, the working bee, and the drone trils. There is a continuous increase of bee. There was a division of labor among these secretions, which become more or less purulent in the advanced state of the malady. The mouth is hot, red, and "furred," bee bread, for the nourishment of the young often presenting here and there raw-looking. brood, bees appointed to shape the cells, spots, especially on the inner side of the others to guard the hive, and lastly, bees to ventilate the hive. It was a curious fact that the honey bee did not co from flower which it settled, and labored at that single present in some cases. The pulse is quick and weak, and scarcely to be felt, excepting



easily used. It will be a most acceptable book in famllies, mission churches, and, if our taste was the rule it would be used in Sabbath-schools." The Evangelist says :- "The Publication Committe S. E. cor. Sixth and Market. of our Church have just issued a volume which we ap prehend is destined to become highly popular among our churches. It is entitled, 'Social Hymn and Tune Book,' and is designed for the lecture-room, prayer-meeting, family-circle, and mission church. It is one of the neatest and most tastetul volumes of the kind, CUSTOM DEPARTMENT, which we have ever met with. Although a 16mo o 512 pages, it is by no means bulky, while the print is clear and distinct, and sufficiently large for common No. 1 South Sixth Street. use. Most of the hymns are from the Church Psalm istrand by means of the index with its references every hymn can be identified in the two books. The 932-tf tunes and hymns are arranged throughout the volume on alternate pages, so as to suit the convenience E. O. THOMPSON, of a promiscuous congregation, and enable them t join intelligently in their songs of praise." FASHIONABLE TAILOR. The American Presbyterian Says :- "This Hymn Book is really charming in its propriety and good N. E. corner of Seventh and Walnut Sta taste as an article of manufacture. . . . In the

PHILADELPHIA.

N. B.—Having obtained a celebrity for cutting GOOD FITTING PANTALOONS. making it a specialty in my business for some years past, it is thought of sufficient importance to announce may know of my method and give me a trial.

FASHIONABLE CLOTHING. Ready-made and made to order.

FASHIONABLE CLOTHING, Ready-made and made to orde

FASHIONABLE CLOTHING,

- 287

well froze solid and remained so some time. The writer has visited this well three different summers, the last time but three or four weeks since, and each time saw the ice (which is plainly seen by casting the sunlight down the well by a mirror,) and was well informed of all the facts by the family residing on the same premises and by friends in the vicinity. The only deviation from the facts as stated is that somehas disappeared, but for a few weeks only.

It has been found, by digging several rods from it, that the same frozen condition of the ground exists at about the same depth. But none have yet given any satisfactory solution of the phenomenon.

In this same town, and within a few miles of the pleasant village of Brandon, are the tesselated pavement.-Globe. quarries of the purest white marble, iron ore, kaolin or porcelain clay, and large quantities of ochre of various shades of color, all of which are worked and sent to market, and coal of a peculiar kind, not in large quantity, of chocolate color, solid, but in in it are found embedded the remains of nuts of a kind not known and the form of limbs and branches converted into coal.

MANUFACTURED ICE.

It was published last winter that a Captain Girarde, of Augusta, Ga., had invented an engine by which he could rapidly manufacture ice of the finest quality. A distinguished Kentuckian, just from Augusta, called on us yesterday with a pleasant message from Captain Girarde, and confirmed all the latter had published. He visited Captain Girarde's establishment, where he saw a small engine, about six feet long, turn out in ten minutes a solid cylinder of ice of twenty or twenty-four inches in length, and from eighteen to twenty-four in circumference, as transparent as the finest ice from the Northern lakes. The with the cooling article, and he says that, operation upon the scale he contemplates, is an independence that she has an un- der eighteen feet in diameter and twenty

now sure that the bottom lies some two supply. The well was stoned, or walled up thousand six hundred feet below the coast at Jaffa. This is a depression of surface beyond comparison with anything of the kind, and undoubtedly it is due to some tremendous natural convulsion, the memory of which is preserved in the legends of the buried cities, and in the dreadful and accursed aspect of the sea itself.-London Telegraph.

INTERESTING DISCOVERY AT POMPEII. Abundant details have been received from Naples respecting the freshly uncovered temple of Juno, among the recent excavations at Pompeii. Three hundred skeletons were found crowded within that sanctuary, a propitiatory sacrifice being evidently held in the hour they were overwhelmed. The statue of the goddess, with attendant peacock, the tripod in front of the altar, the golden censer, the jewels on the person of the priestess, the rich vessels holding a deposit of animal blood, are the main particulars dwelt on, no chapter in having themselves in their usual decorous times. about the first of September, the ice that awful story being more instructive or interesting. The eyes of Juno were of the most vivid enamel, her arms and her whole person richly decorated with gold trinkets, her gaudy bird resplendent with a cluster of glittering gems. Aromatic ingredients lay calcined within the censer, while gorto their soher senses

geous lamps and bronze ornaments strewed

CHOLERA ATMOSPHERE.

It has long been a question among scientific men, says the Opinion Nationale, whether the immediate causes of cholera exist in the atmosphere or not. Experiments recently made in Egypt seem to favor the affirmative. Two balloons were sent up, one of them over Alexandria. the other over a village in the isthmus where cholera had not made its appearance. From each of the balloons was suspended a piece of fresh beef cut from the same ox. After the balloons had remained up for some hours they were both pulled down, and the beef suspended over Alexandria was completely tainted, while that which had been suspended over the village was as sweet and good as ever.-Galignani.

AN ENORMOUS STEAM HAMMER is being made in England which will strike a blow equal to seventy-five tons. The anvil for this hammer has just been cast, and will weigh two hundred tons; it is pyramidal inventor now supplies the city of Augusta in form and measures twelve feet square at into any interpret and he says that, the base, and twelve and a half feet in when he shall get his establishment in full depth. Three months will be required for it to cool before it can be worked. Some he will be able to furnish ice at one cent a idea may be formed of the blows this enorpound. We congratulate the South that mous casting will receive when we are told she can hereafter grow her own ice. That that it is to rest on a bed formed by a cylindoubted right to assert. - Louisville Journal] feet in depth, filled with concrete.

ing, and he gave them some rum to revive The period of incubation of the disease them. Instead, however, of using it as a is found to vary, the majority of animals medicine, they drank to excess; for, on sickening on the tenth day after exposure looking into the hive subsequently, he to the infection, but some have been atfound the ladies in waiting, instead of he- lacked on the seventh day.

manner, tumbling about, and the queen MULCHING PEAR TREES.

herself very tottering. In fact, they had got so drunk that, though it was November, they thought it was swarming time, ery large amount of water, parting with it and rushed out of the hive, but the frosty t the surfaces of its leaves, depositing durair soon sent them back to their hive and ing its passage the matter it. We have all noficed that a continuous stream of lukewarm Of drones, or male beet, there were from water soon causes the substance on which 1500 to 2000 in a hive//It might be asked it falls to become much heated; and thus what was the use of 2000 drone bees in a hive, since the queen by selected one as her husband, and if the husband died never in summer the sun falling on the earth around a pear tree, naturally gives to its water a large amount of heat. Although married another, bu remained a widow. owing to the small amount of such water Well, this was a plzzling question. He which would comparatively pass into other kinds of trees, they might not be injured; had made a discovery which led him to adopt a theory which he must acknowledge yet with the pear tree the quantity is so had been opposed by certain able apiarians large that it stiffens the vegetable albumen During the breeding time, when the bees of sap, from the great accumulation of heat, were developing in the cells appointed for and prevents the easy and natural flow to that purpose, the temperature was never less than 80 or 90 degrees. During the the termini of the tree, causing summer blight, etc. All this is easily prevented by a cool of the morning, till twelve at noon, slight mulching. It should be remembered, the drones remained in the hive. At however, before severe weather in the fall, twelve they went out for an hour or so, and that this mulch should be drawn away from then returned to the hive, remaining till the tree, and not restored until the tree has evening. He noticed that the time of their parted with its leaves. When this is negabsence was just when the sur was hottest, lected, the pear tree will continue to take and the drones being fat, he believed that up water during its late growth, which frethey remained in the hive to keep up the quently deposits itself, between the tree and heat. The drones were drunken, lazy felthe bark, thus causing loose bark, winter lows. As soon as the queen selected her blight, etc. When the growth, however, husband, the other males began to sip up is arrested by the romoval of the mulch the the honey, never doing anything to keep up capillary attraction is rendered less active, the stores of the hive. The other bees at an earlier date; thus the tree is promust have learned somewhere the maxim tected .- Working Farmer. that if any man will not work neither shall

he eat, for as soon as they began to fill the hive with honey, they garroted the drones and threw them out of the hive.

The lecturer then pointed out the folly and wickedness of those who, using the common straw hives, burned the bees to get the honey. There were three different kind of hives by which this might be avoided-the storying, the collateral, and

