ice business is a nice one. Just at present the companies have declared a great scarcity of the article, and have cut off supplies so that they actually refuse to sell at all except to old customers. We are informed by those who know, that there is plenty of ice in the usual storehouses, but that the dealers are operating for a rise. There is, of course, no law against such a proceeding, but that which ordinary business integrity and fair dealing should suggest. The discomfort entailed upon healthy persons is considerable, but the suffering of the sick, unable to obtain a cooling draught, must be great indeed. At this present writing—9 A. M., August 11th—the thermometer marks 84° in the coolest part of our office—a very slight reduction from yesterday at noon.

While the Dog Star rages, it is well to avoid all excesses, physically and intellectually, and live as near like hermits as possible. The city and country abounds with green fruit, than which there is no more active agent for inducing summer complaints of all kinds; avoid it in all shapes and you will escape unharmed. Drink sparingly, keeping the mind tranquil, and the return of more invigorating weather will refresh and build up enfeebled frames.

NEW KIND OF REFRIGERATOR.

Ice is so scarce, and the price so high, at present, that comparatively few persons can afford to pay for it. In this exigency, a correspondent makes the following suggestive inquiry :—"Would it be practicable to make a refrigerator on the principle of evaporation that would be capable of maintaining its temperature sufficiently low for practical domestic use? Could not one be made of earthenware, the temperature of which might be reduced by the use of sulphuric acid, to a low point; and could it not be made sufficiently cheap to be accessible to persons in country towns where ice is not generally preserved?"

We believe that refrigerators formed of porous earthenware may be made and used with satisfaction without requiring ice. Of course ice is the most convenient and acceptable cooling agent, but when it cannot be obtained, or is too expensive, porous earthenware refrigerators may be substituted. The natives of oriental countries keep their water in porous earthenware vessels, from which they obtain cooling draughts. By placing a porous vessel containing water in the sunshine, and sprinkling water upon its surface, the water inside will become almost ice-cold. Evaporation produces a cooling effect upon surrounding objects; and the water in the porous vessel has its heat abstracted by the above evaporating process. This principle may be applied to a refrigerator. A refrigerating porous filter is illustrated and described on page 412, Vol. IV. (old series), SCIENTIFIC AMERICAN.

The following is a list of mixtures which may be useful to our readers :—

First—Muriate of ammonia, 5 parts; nitrate of potash, 5 parts; water, 16 parts. In such a mixture as this the thermometer sinks 40°.

Second—Nitrate of ammonia, 1 part; water, 1 part. The thermometer sinks 46°.

Third—Sulphate of soda, 5 parts; dilute sulphuric acid, 4 parts. The thermometer falls 47°.

With the use of ice or snow, other mixtures may be made, in which the thermometer will fall 50° below zero; but we have given those which may be employed when snow or ice cannot be obtained. The salts for these mixtures should be fresh, dry, and reduced to a powder before being used. The vessel in which they are dissolved should be thin and a good conductor.

The Perils of English Railway Travel.

Late English papers contain some shocking accounts of the condition of railway travel in that country, as relates to the safety of passengers shut up together in the narrow apartments of the coaches, called cars. It would seem that the danger lies in conveying, indiscriminately and without previous knowledge of each other, persons closely confined in small apartments, and cut off from all communication with the outer world. The guard appears to restrict his duties to locking the passengers in at the several stations, and to exciting the wrath and derision of small boys: and is so far from exercising any other protective supervision over the unfortunates who travel by rail, that if criminals, or lunatics, happen to be shut up in the cars, and take a fancy to rob or murder their fellow-passengers, they exercise the whim as it seizes them, without let or hindrance. Such cases have actually occurred, and the press is very naturally calling attention to the matter. Here is the latest outrage of this kind :—

"A Mr. McLean and a Mr. Worland, took seats in a second-class carriage, by the Friday night express, from Liverpool to London. In the same compartment were a moody-looking Irishman and an elderly woman. He now and again talked to himself somewhat fiercely, and seemed to be threatening an invisible foe. Mr. McLean and Mr. Worland glanced at him, and then continued in friendly chat. Now, it happened that the man had been insane, and was rapidly growing insane again. A wild notion was fast acquiring the strength of a fixed idea. The two men, in familiar chat, were thieves planning how they could rob him, and he was resolving to be first in the field. As soon as the train had left Bletchley, the maniac drew a knife and stabbed Mr. Worland in the head. He drew back his arm to repeat the stroke, when Mr. McLean, who seems to have had his wits about him, knocked him back into his seat. Springing up, the maniac made another dash at the now insensible Worland; but here he was foiled again by McLean, who gripped his throat and his armed hand, and a close combat began. All the time the train flew rapidly through the country. The woman sitting near the other window had done all she could to alarm the driver, by wasting her screams on the morning air, and now lay insensible from the effect of terror. The madman drew the blade of his knife through the fingers of McLean, and thrust with it wildly. Worland had now regained his senses, and he at once entered into the combat, getting behind the madman, and throwing him down. The maniac's yells were louder than those of the woman; they were continuous, but neither guard nor driver heard them. For 40 long miles this scene lasted, seen by none except those engaged in the strife; until a ticket-collector, hastily opening the door, saw the two gashed and haggard men bending over the exhausted madman on the blood-stained floor."

We make a great outcry in this country if the door of the car be shut, if we desire it opened, or if the window is closed by some unfortunate rheumatic against our wishes. But we may well spare our complaints and grumblings, and thank fortune that the stupidity of English railway directors is not visited upon us. If John Bull wishes to improve the safety of his railway travel, let him import American cars, and he will have no more robberies and murders.

Spare the Little Birds.

We have often had our patience sorely tried by the sight of great overgrown boys and men, armed and equipped contrary to law, for slaughtering the small birds that flit about our dwellings and make the groves vocal with song. To any thinking person such a practice is as absurd as it is inhuman; for what can be more foolish than to see a great hulking fellow pause, deliberate, then steal cautiously up, and fire at a little wren or chipping bird that he might hold in his hand? Such an achievement is a wonderful display of sportsman-like qualities, and if persisted in will breed a race of Nimrods of which the world never saw the like. We think, however, that boys, in particular, shoot birds more from thoughtlessness than any other motive; and they should be restrained from so doing by their parents and others who have influence over them. If children of large and small growth will only reflect a moment, they will see that the bird in the bush, is in a literal sense, worth a dozen in the hand; for the former delights us with its song, and does a world of good to the farmer, in destroying worms and other insects; while the dead ones are only little silent heaps of feathers, that speak of nothing but the wanton cruelty of their slayers. A writer in a cotemporary thus expatiates on the value of small birds in the economy of nature :—

"The spring proves the importance of the question whether our small birds shall be preserved or exterminated. This year the caterpillars were never known to be more numerous or more voracious. In many districts the small fruit is almost destroyed by them, and gardeners are forced to employ boys to pick them from the trees. This, of course, cannot be so well done as by nature's scavengers, the birds. In my own garden I have none, and the apple trees are covered with worms of two or three kinds, which have destroyed most of the buds and the young fruit. The effect of the universal tendency to destroy the small birds will be yearly more disastrous, unless active measures are taken to check the evil. At present these useful—nay, indispensable creatures, are at the mercy of the half educated men who shoot them, entrap them, and poison them; boys are allowed by their parents to rob their nests, and thus destroy what, in the great scheme of nature, is of more value than themselves. In my own neighborhood, where (as I have observed) insects of the most pernicious kinds were never more abundant, a lady has, this spring, poisoned with strychnine, at one dressing of her grounds or gardens, no less than 800 birds of various kinds; and she was, a few days since, preparing for a second destruction. To counteract this senseless and barbarous extirpation of our best friends, by man, woman, and child, I look to the schoolmasters and the clergy; who, as yet, seem not to have been fully convinced of the importance of the subject."

RECENT AMERICAN PATENTS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week. The claims may be found in the official list :—

Improved Projectile.—This is an improvement made by C. W. Stafford, on his celebrated sub-caliber projectile. Its peculiar structure, and the high velocity which may be imparted to it, adapt it to penetrate the heaviest metallic armor, and it carries into the aperture, so made, a mass of incendiary or explosive material; which, being ignited and discharged within the opposing structure, effects the complete destruction of the latter. The patentee's address is New York city.

Gas Engine.—The object of this invention is to use petroleum or other hydro-carbon liquids for the purpose of giving motion to the piston of an ordinary cylinder without the use of a furnace. The invention consists in the employment for the purpose of producing a direct motive power, of petroleum, naphtha, or other hydro-carbon, in the form of vapor, mixed with a sufficient quantity of atmospheric air to sustain combustion in such a manner that, by igniting said vaporized hydro-carbon liquid in the cylinder, the desired reciprocating motion of the piston is effected. The invention consists, further, in the arrangement of a double cone, the inner cone being provided with a concave top, and its surface being covered with cloth or other absorbent material, and the outer cone being made adjustable in combination with the cylinder, in such a manner that, by the suction of the reciprocating piston in the cylinder, a current of air is caused to pass through between the two cones, where it is brought in contact with the liquid spread over the absorbent surface of the inner cone, and thereby saturated with the vapors of said liquid, and that a mixture of air with vapor is thereby produced capable of being ignited by an electric current. The invention consists, finally, in the arrangement of one or more layers of wire gauze in the induction ports of the cylinder between it and the gas mixer, and in such a manner that the fire is prevented burning back. Oscar H. Kratze, of Leipsic, Saxony, is the inventor, and the patent has been assigned in full to F. F. Mangelsdorf, care of Metropolitan Gas Light Company, New York.

Coal burning Furnace.—This invention consists in placing a partition within a furnace, in such a position as to divide the furnace into two compartments, one for the fuel and the other to receive the products of combustion, and arranging the throat or passage which forms a communication between the two compartments, in such a relative position with the fuel that the smoke and gases must, in their passage to the flues, pass through a portion of the fire and be brought in contact with oxygen supplied from a pipe at the throat, whereby a perfect combustion of all the inflammable products of combustion is obtained, The invention also consists in the employment of a man-hole and damper, arranged in such a manner that the flues of the furnace are rendered accessible,