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"EVEN AS WE HAVE BEEN APPROVED OF GOD TO BE INTRUSTED WITH THE GOSPEL, SO WE SPEAK; NOT AS PLEASING MEN, BUT GOD WHICH PROVETH OUR HEARTS."

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NOW.

BY SUSAN COOLIDGE.

Love me now! Love has such a little minute,
Day crowds on day with swift and noiseless tread,
Life's end comes ere fairly we begin it,
Pain jostles joy, and hope gives place to dread.
Love me now!
It will be too late when we are dead!

Love me now! While we still are young together,
While glad and brave the sun shines overhead
Hand locked in hand, in blue, smiling weather.
Sighing were sin, and variance ill bestead,
It will be too late when you are dead!

Love me now! Shadows hover in the distance;
Cold winds are coming; green leaves must turn red.
Frownest thou, my Love, at this sad insistence?
Even this moment may the dart be sped!
Love me now!
It will be too late when I am dead!

ON THE BATTLE-GROUND OF EL MOLINO DEL REY.

BY JOAQUIN MILLER.

[The King's Mill. An armory now; but you still hear the faint rumble as of the stones and water-wheels as far out on the battle-field as the little monument set up by President Diaz. Lying here in the short brown grass one day last winter, some crickets crept up out of the ground and grass and began to sing under my feet and all about me the old familiar hearthstone songs of home. The Castle of Chapultepec lay below, a cannon's shot distant; the spires of Mexico City rose above the stately moss-swept cypress trees, only a league distant. Behind and above for many miles, lay a sloping field of *maguey*, where many Mexicans were busy gathering *pulque* in pig skins which they bore on their ragged and wretched backs. After awhile a woman, leading a large-eyed and lovely but starved child, came out from an adobe hut on which sat many vultures. She was half naked; the little girl almost entirely so. She began cutting the short, dry grass with a small hook and putting it in a bag on her back; the child feebly pulling a few spears with its little, bony hands, and helping all it could. Such is the hardest fought battle-field of the Mexican War to-day.]

Some black-clad crickets, and a far, faint sound;
Some volleys of smoke down the valley blow;
The great gray walls, that are walled around,
The great gate-posts, that are peaks of snow!

Walk on in the grasses; and wander around.
Ah! pity and tears *El Mosino del Rey*—
A brown, sweet babe on the blood-soaked ground,
And its half nude mother a-mowing hay!

O crickets, sing on with your mournful sound
This lesson of war to the latest day—
A gaunt brown babe on the battle-ground,
A half nude mother a-mowing hay.

My country's gift to a neighbor drowned
In blood and in tears of her natal day—
A mute brown babe on a battle-ground;
A mute starved mother a-mowing hay!

Oh! pity I say, and a shame profound
For the brave old flag and that battle day
That won a babe on the blood-soaked ground;
A hollow-eyed mother a-mowing hay.

Yes, boast of this fight! Let the toast go round
In the vast rich land that is far away;
But a nude brown babe on this battle-ground
With its half nude mother is mowing hay!

Let proud men vaunt with a boastful sound
Of the destined course of the stars. I say
A starving babe on your battle-ground
With its starving mother is mowing hay!

CASTLE CHAPULTEPEC, MEXICO.

NOTES FROM ENGLAND.

BY JAMES PAYN.

THE question "whether we may do ill that good may come" is one that does not affect the Jesuits alone. The temptation is one that often occurs; and, though there is no doubt that it ought to be resisted, it must be confessed that there are sometimes what seem to be excuses for those who succumb to it. Two Bermondsey curates have been masquerading as "unemployed" persons, in order to see with their own eyes how matters in "the stone yard" are conducted. Their motives are, of course, above suspicion; but to carry out their design, it was necessary to give a false description of themselves, in doing which they have incurred certain pains and penalties.

The Board of Guardians pretends to be very indignant, and vapors about a prosecution; but the fact is this is one of those occurrences in which the intention absolves the transgressors. Nevertheless, it was a foolish thing to do. Nothing is more common than for newspaper correspondents to assume various characters for the sake of acquiring special information; and no one clames them. But it is scarcely becoming in a clergyman. In the present case the circumstance is not altogether to be regretted, since the report of the two clerical stonebreakers is most satisfactory as regards the treatment of the poor by the officials.

For the second time within a compara tively short period the bloodhounds employed in the play of "Uncle Tom's Cabin" have shown too great a genius for the stage, and carried away by dramatic enthusiasm—or, perhaps, finding too much calf upon the supposed Negro's calf to be resisted—they have almost torn the fugitive slave to pieces. For the future the character of Uncle Tom will probably not be "run after," if dogs are to run after the man. I cannot fancy anything more likely to put an actor out in his part than the idea of these bloodhounds taking matters in earnest; I should always be interpolating conciliatory speeches to the animals ("Good dog!" "Good old dog!") in the most startling situations, and spoiling the dramatic catastrophe for fear of a real one. Bits of liver, thrown, Atalanta like, to one's canine pursurers, might, perhaps, assuage their fury; on the other hand, it might give them a taste for liver; and, should the demand exceed the supply—no, I will not make my theatrical *début* in that piece.

A policy on the life of the Queen was offered for sale, the other day, at an auction mart, which seems, if not high treason, a little like it. I rather wonder nobody bought it, for the curiosity of the thing; though, to be sure, it would have given him a direct interest in her Majesty's death, which a loyal subject might well shrink from possessing. The total of the policy value was £1.600, and the annual premium £25. Her Majesty is in her sixty-seventh year. Not being an actuary, I don't know what should have been given for it; but it strikes me as odd that not only was no "fancy price" offered, but that the auctioneer failed to obtain a bid.

Some curious person has been computing what Patti received at her Parisian concerts. She did not actually change her notes for gold, but she seems to have received a dollar—4s.—for every note. There were 3,000 by the score, so she got £600 for them. This seems pretty well for a *vox et præterea nihil*, but it is not so very much for one who is at the head of her profession. A leading barrister has been known to get as much for a single day's work in Court.

What is noteworthy about the computation is its particularity; a circumstance which is quite in accordance, however, with the system of payment that now prevails. There was a time when the phrase "penny a liner" had quite an exceptional significance. To be paid by the line seemed an absurdity. Byron scoffed at Scott for getting "half a crown a line" for his "Marmion"; but no one poked fun at Tennyson when he received a guinea a line for a poem in a magazine. If it excited any astonishment it was by the price and not by the mode of payment. Of late years nothing is more common than for authors to be paid by the word. It may not necessarily amount to more than the sums they received of old (though I am glad to say it generally does) but they are requested to furnish an article or a story of so many thousand words. The system began in Trollope's time, who could tell at once, when he received an intimation of this sort, exactly how much was expected of him; but it has now become the ordinary usage in the case of "bespoken" papers and short tales.

Certainly no author has been at once so brilliant and so prolific as Victor Hugo. When alive, his compositions were more numerous than those of any of his contemporaries; and now that he is dead his posthumous works seems likely to rival them in extent. I admire his genius so exceedingly that I can hardly imagine him writing anything that had not great merit; but, as a rule, I distrust posthumous works. It was certainly not modesty, nor the prudential consideration of not overloading the market, which caused Victor Hugo to keep those MSS. in his desk. The Horatian maxim did not trouble him. It is possible, of course, that some literary "gems of purest ray serene" will be brought to light; but I confess I don't like the inventory that has been published of them. One piece is said to describe two lovers lost in a wood where grow poisonous herbs, and where they are saved from an ogre king by a romantic brigand; another tells of a mysogynist walking in a flowery mead, who meets a damsel who changes his views; another describes the conversion of an atheistical marquis by a believing beggar. These things do not strike me as very promising, or worthy of the author of "*Les Miserables*."

In losing Mr. Forster we have not only lost a vigorous and honest statesman, but one of the most picturesque though rugged figures of London life. His independence of character never permitted him to take the gloss of swelldom; and, indeed, the more socially elevated were his surroundings, the more he seemed to stand apart from them; among courtiers and diplomatists he thrust his hands more deeply than ever into his pockets, and gave that incredulous "What" of his, in a more uncompromising tone. Under that rough manner, however, lay one of the kindest of human hearts. His sense of justice was so strong that a wrong imputed to a class, and in general terms, would cause him to take up the cudgels for them as though it were almost a personal matter. The author of a work of light literature, of my acquaintance, speaking with some pardonable predilection of the kindness of the leaders of his own profession, had contrasted it with the lack of geniality among politicians, and Mr. Forster went out of his way to defend them, in a convincing fashion, illustrated by his own experiences of public life. His manner was curt, which caused him to be misrepresented as careless of the feeling of others, and he was neglectful of those conventional observances, which, while affecting to represent goodwill, are generally but the polite mask of indifference. His humor was dry; but there was a twinkle in his eyes, when he told an amusing story, which saved him from the reproach of narrating what was "good enough to evoke a smile from others, but not from himself." On matters of which he had made no study he was wont to listen with interest and a trust that was not always justified; for he was accustomed to think every one an honest man till he had found him to be the contrary, after which he had no hesitation in making known his discovery; a trait in his character which was the key of his whole connection with the "Irish Party." Though so generally respected, he had not the attributes which secure social popularity; but those who knew him best, loved him best, and have lost in him the best of friends.

LONDON, ENG.

A PLAIN MAN'S TALK ON THE LABOR QUESTION.*

SOCIETY AS A CO-OPERATIVE ORGANIZATION.

BY SIMON NEWCOMB, LL.D.

I DO not address you, dear reader, as an authority on this subject, propounding a code of doctrine which you are bound to accept. I am only a plain man, who has all his life tried to find out what he could from study and observation about the state of society in different countries of the world, and about the relation between the great operations of industry and commerce on the one side, and human welfare on the other. I do not expect to tell you anything which you cannot easily understand, and most of the facts I have to lay before you, you must already know; or at least you can easily verify. Of doctrine I have little or none. If asked what excuse I can make for putting in my voice when so many people are talking, I might reply by saying that it seems to me that we are mixing up too much sentiment with our discussions of the subject in books and newspapers. The whole question at issue is a practical one of cause and effect, and not a sentimental one in which questions of likes and dislikes should come in. We never cure an evil by mere complaints. If one exists, the true way is to study it out, see what it consists in, and then devise some practical measure for removing it.

Having been a student of science in my time, I have been led to inquire how it is that science has been so successful during the last two hundred years in promoting the arts of life. My conclusion is that this has come about through rejecting all the old sentiments and theories, and starting out with a study of facts. This is what I think we ought to do in studying the labor question. We can reach no conclusion of practical value until we get a clear view of the facts of the case as they are presented to us. The great difficulty in getting such a view of the facts is that we are attentive mainly to the few facts which happen to

in no respect inferior to those for breadth, vigor and freshness of coloring.

Of J. F. Lewis were to be seen some excellent examples, prominent among them the "Encampment in the Desert," of which Mr. Ruskin wrote in such enthusiastic terms of eulogy on its first exhibition by the Old Water-Color Society in 1856. An English traveler is represented reclining in the shelter of his tent, under the heat of a cloudless African sky. Arabs and Negro attendants surround him, and in the background rise the barren steeps of Mount Sinai, the wide waste of scorching sand and burning rock being relieved only by the scanty foliage which grows about a small hamlet in the middle distance. Intense finish and fidelity to Nature are qualities which, in works of art, have always possessed a remarkable fascination for Mr. Ruskin—a fascination which, I hope it is not presumptuous to suggest, appears at times to blind him a little to the lack of higher artistic merits. Now Lewis's "Encampment" is finished to a degree of minuteness which throws into the shade the most painfully elaborated work of the pre-Raphaelites; in truth to Nature, moreover, it is no doubt irreproachable, and in facial character and expression perfectly successful. But the painting is hard, meager, and deficient in charm; there is no evidence in it of the ease and enjoyment which are inseparable from really great painter's work; and the coloring, however true, is not *per se* delicious. The artist was one of the most accomplished draughtsmen of recent times. His etchings of animals are in the highest degree masterly, and superior to anything else of the kind that I have seen. His Spanish sketches, lithographed by himself, are not less admirable, distinguished by a breadth and a swift decision of touch which remind one at times of Velasquez. But excellence in drawing does not of necessity imply excellence in painting, and Lewis's finished work in color is constantly injured by the same defects as the "Encampment," a hard, dry manner, and an unpleasing excess of elaboration.

In striking contrast to such work as the above were the numerous superb drawings by William Hunt, exhibited by the Society. Hunt was one of the most delightful and accomplished masters of water-color painting of the English School. His range of subjects was limited and unambitious—flowers, fruit and still life, varied with studies of rustic figures, and occasional bits of quiet, homely landscape. But his treatment of these subjects was such as to place his performances in the highest rank of works of art. His coloring is glorious, and every touch of his pencil displays that delight in the work itself which is a distinguishing attribute of the greatest artists. Among the most important of his productions here exhibited, were the two well-known drawings entitled "The Attack" and "The Defeat." The former represents a young country lad seated at a table, and making vigorous onslaughts upon a large pastry. In "The Defeat" two fragments of bone laid upon the table are all that remain of the repast, while the boy, overcome by his prolonged exertion, has fallen asleep in his chair. In addition to the artist's never-failing beauties of color and texture, these drawings display that charm of quiet humor, which so frequently enlivens his work of this class. Hunt's unrivaled skill in the painting of flowers and fruit was shown in various exquisite little works, among which a study of primroses, growing wild upon a mossy bank, remains especially in my memory, as an instance of the most perfect conceivable success in rendering the fresh bloom, the grace and mystery of these lovely flowers of spring.

Hunt's rural grace and simplicity are shared, although with far feebler executive powers, by an artist of our own day, Mrs. Allingham, one of the most deservedly popular of living members of the Old Water-Color Society. A collection of her drawings, illustrating old Surrey cottages, is at present on view at the Fine Art Society's Gallery in New Bond Street, and will amply repay, with feelings of genuine delight, the attention of all who love Nature, or who are capable of appreciating delicate and graceful workmanship. But while the "counterfeit presentments" of these picturesque old cottages are daily attracting admirers, the originals themselves are fast disappearing from the face of the earth. In the introductory note to Mrs. Allingham's catalogue, a melancholy picture is given of the barbarous and wholly unnecessary destruction of these remnants of Old England, which is being carried on from day to day. Their homely comfort, their picturesqueness, their historic interest, are ruthlessly disregarded to make way for the meanness and dreariness of modern, cheap masonry; nor have the jobbing Vandals, in the majority of cases, the excuse of decay to plead. The stout timbers and solid work of most of the cottages would last probably five times as long as the wretched stuff with which they are supplanted. "It would, perhaps, be a low estimate," says the catalogue, "that two thousand ancient cottages are now disappearing in England every twelvemonth, without trace or record left; many that Shakespeare might have seen, some Chaucer; while the number 'done up' is beyond computation." I make no apology for referring, in an American journal, to this painful subject, since I know that American visitors to this country, as a rule, take as much interest in the remains and records of Old England as we ourselves.

RICHMOND, SURREY, ENGLAND.

Biblical Research.

THE NEW TESTAMENT MANUSCRIPTS IN THE PALATINE COLLECTION OF THE VATICAN.

BY PROF. BENJ. B. WARFIELD, D.D.

STUDENTS of the New Testament text will remember the scorn with which the Abbé Martin, in 1884 (when he published his "*Description Technique* of Greek MSS. of the New Testament" found in the Paris libraries), laughed at the critics who had gone on year after year, and age after age, repeating each other's lists, and never looking for themselves into the libraries to see what manuscripts might really be there—or even in the official catalogues. It was certainly startling to see him "look into the libraries," and find seventy or eighty new manuscripts not hitherto placed in catalogues of N. T. codices. Something of a similar moral can be read from what has just happened with reference to the Palatine MSS. of the Vatican on the publication of Mr. Stevenson's catalogue of the Greek MSS. of that collection (Rome, 1885). We translate a notice of Stevenson's catalogue from the pen of the veteran paleographer, Dr. Von Gebhardt, printed in the *Theologische Literaturzeitung*, 1886, 6, 128, 129:

The latest list of the Greek Manuscripts of the New Testament contained in the Palatine Collection (in Scrivener's "Plain Introduction," etc., Ed. III, p. 672), exhibits only nine of them in all; Stevenson's catalogue, on the other hand, contains, apart from some small fragments (in Codices I, 235 and 242), not fewer than twelve. To the nine mentioned by Scrivener are added—namely: (1) A manuscript of the Pauline Epistles from the *tenth* century, with Scholia (Cod. 10); (2) a manuscript of the Acts, Catholic Epistles and Pauline Epistles of the *twelfth* century (Cod. 38); (3) a manuscript of the Pauline Epistles with Scholia, of the *eleventh* century (Cod. 204). We cannot understand how it has happened that heretofore the Palatine Manuscripts of the Gospels (for all nine of Scrivener's manuscripts are such) have been completely catalogued, while the much rarer manuscripts of the Acts and Epistles have been passed over. Another strange phenomenon meets us in this: that the dates, which it has been customary to assign to the nine Codices heretofore known, agree with those given in the new catalogue only in a single case (Cod. 189—Scrv. 150). The most marked differences concern *Codd.* 5—Scrv. 146, 136—Scrv. 148, 226—Scrv. 151. These are assigned by the new catalogue to the 16th, 11th and beginning of the 10th century respectively; according to the usual dating they belong to the 12th, 13th, and 11th century respectively. On whose authority the earlier dating rests, the present writer cannot say with certainty (Birch and Scholz?). In favor of the new catalogue here, speaks the circumstance that its date has been assigned in concert with one of the most learned of Greek paleographers, the so lately dead Charles Graux (*Cf.* "*Praef.*" p. XXXIV sq.).

So far Dr. Von Gebhardt. But had he looked at the appendix to Scrivener's Edition III. (pp. XIX—XXX) he would have found on p. XXIV at No. 247 of Acts and 295 of Paul, "*Palatino-Vaticano*," 38, but assigned to Saec. XI, instead of Saec. XII.; on p. XXV, at 327 of Paul, "*Palatino-Vat.*" 10, assigned to Saec. X.; and at 328, "*Palatino-Vat.*" 204, also assigned to Saec. X.; instead of XI. He would also have found on p. XXIII, Nos. 710—718 inclusive, nine farther "*Palatino-Vat.*" codices of the Gospels (all with commentaries except 716, which has a catena); on XXIV at No. 258, another "*Palatino-Vat.*" cod. of Acts and Epistles (with commentary); on p. XXV at Nos. 329 and 330 two more of Paul (with commentaries); and on p. XXVI, No. 119, one of the Apocalypse (with commentary). Four "*Palatino-Vat.*" service books of the Gospels (Nos. 397—400) are noted on p. XXIX also. The diligence of Dean Burgon has here surpassed that of the official cataloguer himself—if we are to suppose that Dr. Von Gebhardt has not passed over anything mentioned by Stevenson. Dean Burgon's Evangelistary 397 is (or at least includes) the fragment mentioned by Von Gebhardt "*Palatino-Vat.*" 1, but the other two fragments, 225 and 242, do not seem to appear in Burgon's lists. If Stevenson, therefore, has catalogued no less than 12 codices besides these fragments; Scrivener-Burgon give us *eighteen* of the Gospels, *two* of Acts and Catholic Epistles, *five* of Paul, and *one* of the Apocalypse, or twenty-five separate manuscripts in all. To these they add *four* service books; and if, now, we count the three fragments mentioned by Von Gebhardt, and apparently not included in Scrivener, we attain a real total of *thirty-two* biblical codices in this library. This is subject to a possible deduction of one, from the doubt as to whether Evangelary 397 is, or only includes the fragment mentioned by Von Gebhardt. Dean Burgon says: "397, '*Palatino-Vat.*,' 1. Also a fragment in uncial writing." The number is not preceded by the obelus † marking the codex as an uncial; so that we presume the "uncial fragment" is additional and the service-book is not mentioned by Von Gebhardt.

The whole business renewedly illustrates the confusion we are in as to the contents of our great libraries, and makes us long for the second volume of Dr. Gregory's "Prolegomena to Tischendorf," in which we confidently hope to have lists given us which we can measurably trust as both correct and, for the libraries they cover, complete.

ALLEGHENY, PA.

Sanitary.

WATER SUPPLY.

THE progress which has been made in sanitary science and art can almost be measured by the prevailing sentiment as to the need of attention to the character of water supply. Water is so great a conveyancer for all the materials which supply the human system with force that its purity is more indispensable than that of any of the material which it conveys. It is true as to much of food that is taken into the system that digestion has the opportunity to act upon it so as to change its character before it is distributed. It is well known that the chemistry of the stomach often arrests decomposition, and may even partially neutralize the toxic properties of some substances. But water is so readily taken up by the absorbents that any seriously toxic materials that it contains more readily make a profound impression upon the entire system. The clinical evidence in disease, and the study of its etiology, point to it as far more frequently the cause of fevers and of various forms of ailment than are either solid foods or the ordinary air we breathe. Chemistry has long been busy in determining what its most harmful constituents are. Its power of dissolving almost everything submitted to it, its ability to carry in minute suspension such multitudes of particles, and its ready absorption of various gases with which it comes in contact, makes it as ready a conveyancer in the outer world about us as it is in the inner world of our own bodies. But recently this power of conveying disease has been submitted to still higher tests. Koch, Angus Smith, and others, early appreciated that the methods of biological investigation were applicable to the examination of potable waters. These methods have been so far applied that many now claim that no examination of water is complete unless it has thus been studied in order to find out its relation to the microphytes of disease. These minute particulate micro-organisms are capable to some degree of identification and of submission to the test of culture experiments. Evidence has been increasing that various forms of intestinal disturbance are owing to septic non-specific particles contained in water; that dysentery has this as its most usual exciting cause; that diphtheria not infrequently arises therefrom and that malaria in all its varied forms is as much dependent upon impure water as upon impure air.

However dangerous filth-sodden soils may be, as sources of foul air, they are still more so as the sources of foul water. This leads very many cities to seek for a pure water supply before they are able to relieve the ground from the soakage of cesspools by the construction of sewers. While the two are related to each other, it is certainly wise to make sure of a good water supply, even if it cannot be at once accompanied by a sewer system. In cities wells are always extra hazardous, unless at such depths as to be beyond the reach of surface contamination. We hear much about the pollution of rivers; but these stand a far better chance to recover themselves than do polluted wells. The free and open air, the dissolved oxygen, the currents and the flow, the vegetation on the banks or in the streams, and the various forms of minute animal life will often do much to recover and refresh water which has been, to some degree, fouled. But the superficial city well, away from the light and the open air, with a constant supply from soil filled with decomposable organic material, has no such facility for refreshment. Hence it is that books on hygiene and practical medicine abound with instances in which a single well has become a source of serious or fatal disease. Nature at length fails in her conservative attempts, and, having reached the limits of endurance, the well itself becomes the receptacle of befouled water. Thus we have known wells once excellent, by reason of some change in surroundings or some fissure in underlying strata, or some special pollution of the upper soil, suddenly to become a peril to the neighborhood. Invention has recently been very fertile in devising plans for the securement of a cheap and abundant supply of pure water. Its first efforts have been in improvements upon old methods. Watersheds, and the relation of the soil as filtering material, are now very clearly determined. Where rivers or lakes are used, it is not difficult to ascertain beforehand their availability, and to guard them from contamination. Not infrequently a series of springs in some country district are so protected and connected as to insure a good supply. The plan adopted at Princeton, N. J., was an excellent one, and has secured for that borough a most excellent water supply.

The care of water in pipes and reservoirs has attracted much attention, because too often the water in these has been found to be not so good as that in the source of supply. The causes of these changes have led to a more careful construction of pipes and reservoirs, to methods of mechanical aeration and to such distribution as prevents any special exposure to foul air.

No recent method of water supply has interested us so much as the use being made of the various forms of driven and bored wells. It is now several years since such single wells came to be recognized as valuable, and especially as available for armies in marching over arid, sandy plains. Much more recently have they been made available in village and city districts. It now seems probable that in many parts of the country they will become the chief reliance. They are fast multiplying on the New Jersey coast. As similar geological formation exists in many parts of our land, they will become wildely distributed. Within a few days the water from the bored wells of Asbury Park has been let into the main pipes, and thus the lower earth is sending its streams of water through the streets and into the houses of this city by the sea. A very interesting experiment is now being tried at Vineland. An enterprising citizen has proposed to supply the entire city by connecting a series of wells with water-pipes, and by means of engines forcing it to such hights as may be desirable. At one point he has put down within a radius of 300 feet eighty-two driven wells. These vary but little from fifty feet in depth. The last ones put down furnish a little fuller supply than the first, but each of them at least a bucket of water at the stroke of the piston. Two that were put down over ninety feet failed to give much water. These others have been flowing long enough to test both quantity and quality, and seem to indicate that at a depth varying but little in that locality, there are fountains and streams beyond the reach of any surface pollution sufficient for that city when all the rest of New England shall have moved thither. Dry and dusty as the region is, purchasers can now secure the land with water privileges. If the plan succeeds, it will not only give a good supply of potable water, but provide for cheap watering of the streets, and for that aid to the fertility of vineyards and gardens which will greatly increase the growth of those early fruits and vegetables which even now are furnished in no small quantities.

It may be said in general that, beneath us, as well as above us, there is water enough and to spare, and that the people seem to be coming to the conclusion that it must be had in its purity for public and domestic use.

Science.

THE entombed forests of by-gone epochs in the world's history hold numberless products of immense value to the human race. The skill of modern chemists has drawn from the residues left in the distillation of gas from coal not only a series of most beautiful colors, rivaling, if possible, the glories of the blossoms of tropical forests, but a series of essences and aromatic oils as fragrant as the honey of the same flowers, thus bringing back from the grave, as it were, by chemical resurrection, the color and the fragrance of blossoms which never gladdened the senses of man. And now we have from coal tar another remarkable substance resembling sugar, but said to be two hundred and thirty times sweeter, which promises to become an important rival of the best cane or grape sugar. It has received the name saccharine. It is a white substance which dissolves sparingly in cold water, and more rapidly in hot water, and crystallizes from such solutions in short, thick prisms. Alcohol, ether, glucose, and glycerine are all good solvents, and thus saccharine may be used to impart sweetness of taste to any of them. The taste of this new substance is intensely sweet. One part will impart a very sweet taste to ten thousand parts of water. Hence, in many preparations, it may be used to replace sugar, and especially to heighten the sweetness of glucose, syrups, and cordials. It is remarkable that saccharine is without hurtful effects upon the human system. It appears to be innocuous. Taken into the system it is not changed in its composition, but is eliminated from the body unaltered. It thus is not nutritive, like sugar. Experiments made in Germany by feeding it to dogs showed that, when fed in quantity sufficient to give the desired sweetness to food, it had no injurious effect whatever. It was then tried in human stomachs, with the same result. As much as five grames a day has been fed to dogs without hurting them. This amount of saccharine is equal, in sweetening power, to more than two and one-quarter pounds of sugar. In the hospitals at Berlin saccharine has been given to diabetic patients as a substitute for sugar, without any inconvenience or injury. Such patients, to whom all sugar is forbidden, may now safely