I should know when I saw it. But I had no clew to the name of house or street, till at last it struck me to test the value of the crystal as a means of recalling forgotten knowledge. A very short inspection supplied me with 'H. House' in gray letters on a white ground, and, having nothing better to suggest from any other source, I risked posting my letter to the address so strangely supplied. A day or two brought me an answer, headed 'H. House' in gray letters on a white ground." Again, "the question of association, as in all cases of memory, plays an active part in this class of crystal-vision. One of my earliest experiences was of a picture perplexing and wholly unexpected, — a quaint oak chair, an old hand, a worn black coat-sleeve resting on the arm of the chair, — slowly recognized as a recollection of a room in a country vicarage, which I had not entered and but seldom recalled since I was a child of ten. But whence came this vision? What association has conjured up this picture? What have I done to-day? . . . At length the clew is found. I have to-day been reading Dante, first enjoyed with the help of our dear old vicar many a year ago." After these instances (and there are many more in some of which the crystal is purposely resorted to, and often successfully, to see if there be any unconscious information regarding the whereabouts of a missing prescription or a lost key), we may agree with the writer, that "one result of crystal-gazing is to teach one to abjure the verb 'to forget' in all its moods and tenses."

Examples of the objectification of recent sensations are given, but the point is clear enough without instances. Although the author regards recent impressions as a less important element of her dream life and her visualizations than older experiences, she can none the less create a group of figures, and put them in the crystal to see what they will do; "and so far is one's conscious a stranger to one's unconscious Ego, that I sometimes find their little drama so startling and unexpected that I watch the scene with curiosity and surprise." One more instance may be added. The author wanted the date of Ptolemy Philadelphus, felt sure that she knew it and connected it with some important event, but could not recall it. The crystal showed her an old man, "dressed like a Lyceum Shylock," and writing on a big book with massive clasps. Wondering who he was, she decided to carry out a suggestion, and look at the image through a magnifying-glass. The glass revealed the characters as Greek, though the only characters recognized were the numerals "LXX." Then it flashed on my mind that he was one of the Jewish elders at work on the Septuagint, and that its date, 277 B.C., would serve equally well for Ptolemy Philadelphus. It may be worth while to add, though the fact was not in my conscious memory at the moment, that I had once learned a chronology on a mnemonic system which substituted letters for figures, and that the *memoria technica* for this date was, "Now Jewish elders indite a Greek copy."

Our author adds a possible third class of crystal-visions, concerning which she speaks with becoming caution and uncertainty; namely, those that may be connected with telepathy, clairvoyance, and other doubtful faculties. It is true that historically this use of crystal-vision is the most important; and, if we could credit the evidence of wonderful facts revealed by this means, we would indeed have to call in other means of explanation than those science affords. But the methods of using this form of vision for purposes of more or less conscious deception are so various, and lie so close at hand (indeed, our author cites some pertinent cases in which prophetic powers ascribed, alleged to a crystal-seer, were shown to be groundless by the exercise of very ordinary precautions), that we need hardly have recourse to untoward hypotheses as yet. As is well remarked, "it is easy to see how visions of this kind, occurring in the age of superstition, almost irresistibly suggested the theory of spirit-visitation. The percipient, receiving information which he did not recognize as already in his own mind, would inevitably suppose it to be derived from some invisible and unknown source external to himself." A large class of prophecies, too, aid in their own fulfilment; and, in brief, this aspect of the topic presents nothing peculiar to itself, and may be dismissed with the mention of it already made.

We have illustrated in this study the subtilty of the relation between the conscious and the unconscious mental processes. We see what a small proportion of the endless impressions that stream in upon us through the avenues of sense are consciously added to our mental storehouse, and what a very much larger portion must be at the service of those lower strata of consciousness that at times rise so unexpectedly and so mysteriously into the focus of attention. And finally, just as much of the mystery that surrounded the mesmeric phenomena fell away when men looked for their explanation, not in some peculiar gift of the mesmerist, but in the psychophysic constitution of the subject, so the phenomena connected with crystal-vision become psychologically rational when we seek their explanation, not in the magic properties of the crystal, but in the mind of the seer.

NOTES AND NEWS.

THE American Institute Fair in this city, which will close in a few weeks, is well worth a visit from any person interested in the progress made from year to year in applied science. The electrical and mechanical exhibits are especially good.

— The will of Henry J. Steere, one of the wealthiest men in Providence, who died recently, gives away directly and in trust the sum total of $1,139,000. The Rhode Island Historical Society gets $10,000; the Tabor College in Iowa, $50,000; and Roanoke College at Salem, Va., $25,000.

— Dr. Frank S. Billings, late in charge of the patho-biological laboratory of the State University of Nebraska, has removed to Chicago, Ill., to resume the study of the non-recurrent diseases of children, — scarlet-fever, mumps, measles, and whooping-cough. Dr. Billings has fitted up a laboratory at 3600 Michigan Avenue, in which he proposes to prepare virus for the inoculation of swine against hog cholera, and to continue the study of that subject. The importance of such a laboratory to the stock-breeders of the country may be great.

— Leo Lesquereux, the Nestor of botanists in the United States and a well-known student of paleontology, died recently at his home in Columbus, O., at the age of eighty-two. Lesquereux was born at Fleurier, near Neufchâtel, in 1806. He was educated in Neufchâtel, and later occupied chairs at several European educational institutions. At twenty-five he became totally deaf. In 1848 he came to this country, influenced to this step by Agassiz. His works on the mosses of North America in conjunction with Mr. James, and on the fossil botany of the same region, are perhaps the best known.

— Mr. Henry O. Avery, in a letter to *Building* on the efflorescence on bricks, says, "During a recent trip abroad, I noticed in several countries a common occurrence of exuding salts on the surface of brick constructions. On questioning several foreign architects about the cause and remedy, there seemed to be a variety of opinions, and from the seeming contradictions I will note down some: 1. Sulphate of magnesia, due to the presence of iron pyrites (sulphide of iron) in the clay. The action of sulphurous acid generated in the combustion of bituminous coal on the magnesia in the clay changes the pyrites to a sulphate of magnesia. 2. Carbonate of soda, probably caused by the lime of the mortar acting upon a silicate of soda in the brick. 3. Carbonate of lime, formed by the leaching of lime from mortar, carbonated by the carbonic acid in the air. 4. Silicate of soda, caused by using salt clay taken near the sea. There is a common theory that the trouble is mostly due to the action of mortar and the brick together; yet the 'Epsom salts' have been known to appear in ornamental parapet walls where there was no mortar, cement, or grouting of any kind. Some say that bricks burned with wood-fire were exempt from the nuisance, but historical architectural records of Boston speak of 'white saline coatings' one hundred years ago, when wood only was used for burning bricks. As to remedies, several are mentioned. The commonest is water and muriatic acid; but this does not always decompose the sulphate of soda, and will not prevent it exuding again. Oil in mortar, carefully laid, is supposed to prevent 'saltpetring,' one gallon to a cask of lime, or two if cement is used; but this has failed as often as it has succeeded. English architects quite frequently employ a solution of fatty matter, quicklime, and cement-powder; and the French and Swiss masons, a mortar

paste of bone or marble dust, with sand and coloring-matter, used sparingly. For surface treatment, a coat of boiled linseed-oil is often effectual, though sometimes insufficent. An impervious oily varnish is used by many. The backs of bricks have been covered with hot pitch; and in England a preparation called 'Duresco' is used, either transparent or colored, and is said not to peel off. An invention patented consists in placing tarred felt between the face pressed brick and the common brick behind, leaving cavities in the top and bottom flat sides of the front bricks, and connecting them to the common brick backing by pieces of galvanized sheet-iron, punctured to roughen them, and laid between the flat joints of the brick; but this, besides being expensive, has failed repeatedly. In the presence of all these theories, as to cause, effect, and remedy, are we not to conclude that there is no remedy but to wait? The coating is soluble, and is washed off by the rains, and will in time disappear."

— President E. Benjamin Andrews of Brown University is desirous of adding a department of law and applied science to Brown. There will hereafter be an elective course in law for the seniors in the second term beginning this year. As to the prospect of establishing a school of applied science, he says it is not so much a prospect as a hope. Half a million of dollars will be required.

— The following report by Mr. C. L. Calloway, chief officer of the American steamship "Santiago" (Capt. Allen), relative to a waterspout off the Bahamas last April, is one of the best that has been received at the United States Hydrographic Office. One feature of special interest is the fact that the water that fell from the spout was salt water. Although it seems probable that such is often the case, yet there are very few, if any, good observations regarding it, and it is a question of considerable importance relative to the formation of a waterspout. Mr. Calloway reports as follows: "On the 29th day of April, 1889, at about 6.30 A.M., Royal Island (one of the Bahamas) bore about south, distant four miles. The wind was light, from the south-south-east, and the weather partly cloudy. I observed a waterspout forming off the starboard bow (ship heading south-west), and moving in the direction of the steamer at an angle of three points. On account of its close proximity, I was about to steer clear of it, when I observed it breaking, about thirty yards from the ship. Immediately afterwards the steamer passed through the outer edge of the whirlpool, the diameter of which I should judge to have been about fifty to seventy yards. On passing through the outer edge, I observed that the centre was hollow, the water circling from west to east, or against the sun. The water that fell on deck was very salt, and the drops as large as a fifty-cent piece. During the few seconds of our passage through it, the wind blew at the rate of about thirty or thirty-five miles per hour. I did not observe any calm in the centre at all, the water arising from it resembling an inverted fountain. After clearing it, the wind resumed its original force, about fifteen miles per hour. Being the officer of the watch, I had little time to observe the barometer, but it fluctuated one or two hundredths, and then resumed its previous reading. The appearance of the clouds above and around the spout were very ragged and much disturbed, similar to those in a thunder-storm. Their motions were very rapid, ascending, descending, and breaking away from each other after the water had been absorbed into them. The water was whirling very rapidly for several minutes after the break, showing what tremendous circular force there must have been. I may mention, that, upon passing through it, the steering of the ship was not affected, so that if there were any current at all it must have been circular, and confined to the centre." Such reports are of very great interest, and, whenever possible, sketches should be made to illustrate the waterspout at various stages of its formation. The blank form issued by the Hydrographic Office contains a full statement of the items of greatest importance in this connection.

— Gen. M. C. Meigs has had a new edition of the population discussion printed, combining in one sheet the two letters to *Science*, and showing all the results, details, and rates or ratios or percentages, in one table. The article has been noticed by a good many papers, generally with the idea, which is natural, that the author is an optimist. The figures are so great as to startle those to whom they come for the first time. They startled Gen. Meigs. But they are the results of a law of nature and of the environment of the subjects. We may have a great war, but there is no visible occasion for it. Epidemics and pestilences cannot commit such ravage, now that medical and sanitary science are so advanced, as they did in old times of comparative ignorance; and, until the soil is overtaxed for food, about the rate of annual increase of the last two hundred and forty years must, Gen. Meigs thinks, continue without much change. Doubtless a time will come when the causes which have checked the growth of the French will act upon us, but it seems to be distant at present. England doubled her population between 1800 and 1840; Europe added only 77 per cent to hers from 1830 to 1880; we in that time multiplied ourselves by four.

— Professor F. H. Snow has been appointed acting president of Kansas State University. The *American Geologist* points out that four of the Western States have for presidents of their universities men whose professional training and labor had been scientific: Indiana has D. S. Jordan, an ichthyologist; Wisconsin has T. C. Chamberlin, a geologist; Iowa has C. A. Schaeffer, a chemist; and Kansas now has F. H. Snow, a geologist.

— The matter which arouses the Chinaman to pray with most energy, according to the *Missionary Herald*, is drought or the near prospect of famine; but when he so prays, it is not in solemn or thoughtful ways, but by clanging cymbals and the noise of firecrackers and the utmost confusion. *The Missionary Herald* of the English Baptist Society contains a report from one of their missionaries in Shansi concerning a great assembly held to pray for rain, and of the day of thanksgiving which followed after the rain fell. Buddhist and Taoist priests were together in their robes, and four holy (?) men were drawn from their retreats in the mountains, and were "stripped to the waist, and bore huge spiked iron collars around their necks and carried their arms stretched out before them with knives run through their flesh." The uproar was maddening. This was their mode of thanksgiving. The story is told of a mandarin who felt great responsibility for the drought which was afflicting his district, and came to a certain well at Han Tau; and, prostrating himself, he cried, "If rain does not come, I will jump into the well!" And this he did at once. Afterwards, as the story goes, rain fell, and the people regarded it as the result of the very meritorious suicide of this man. The emperor, in order to celebrate such a glorious deed, ordered a tablet of gold to be placed in a shrine around the well, on which this man's name and heroic act were recorded. The well is famous to this day, and it is believed that prayers offered there are sure of an answer. The place is covered with thank-offerings of the people, and the tablets which testify to the virtues of the shrine quite cover up the tablet originally placed there in honor of the official who killed himself.

— The house of a Hindoo of good position is divided into two parts. The zenana is that portion of it which is occupied by the women. It is generally situated towards the back of the house. In the centre of it there is an open court twenty or thirty feet square. This is surrounded by a veranda. In the inner or back wall of the veranda you see here and there all round small doors. These conduct to the private apartments of the women. As the custom in India is for young men, when they get married, not to leave their father's house and set up separate establishments of their own, but to bring their wives into their father's house, a goodly number of women may sometimes be found in the same family. These may all meet together in the open court. Should the husband of one of the ladies of the zenana wish to enter, says *The Missionary*, he must first give notice of his approach, either by knocking or by a loud cough. The ladies at once draw their chudders over their faces, and make a rush for their separate apartments. This small court is the only place in which a zenana lady is allowed into the open air, if open air it may be called. When she has reason to go beyond the walls of the zenana, she is either carried in a close palki or conveyed in a bullock-cart, which, of course, is curtained all round. Should she require to walk a few steps, a large sheet is thrown over her, so that no one may see her.