

## HOUSE-BUILDING.

WE print to-day a letter from a trustworthy correspondent which will, we imagine, amuse all our readers, and interest a good many. "W. H. W.," a professional man in a fair way of business, but not burdened, by his own account, with too much cash, says he has solved a grave London middle-class difficulty,—he has got a solid 14-inch roomy detached house, weather-tight, water-tight, and independent of other people's pianos, for £50 a year. In that sum he has not included £8 for a railway pass, but he has included the needless comfort of a garden, and he has overestimated the interest on the money expended, which ought to be calculated as if raised on a mortgage, *i.e.*, at  $4\frac{1}{2}$  per cent. Fifty pounds may be taken, therefore, as the true rental, and our correspondent has done what thousands of professional men, superior clerks, young city men, and others are striving in vain to do, namely, obtain a pleasant house at a reasonable rent. Nothing nowadays in this vast city presses on an educated married man, with less than £500 a year, like the cost of lodging himself, or rather his wife and children, as he wishes them to be lodged. Any kind of house can be obtained in London for money, except a good cheap house in an enduring neighbourhood. After the life assurance and income-tax are paid, and the accidental but always recurring losses endured, such a man has rarely more than £350 actually to spend on the home, and the rent—in which word we include rates and taxes—is the biggest and most inevitable of all the regular outgoings. Continental people in the same position always accept this, and calculate that rent must be equal to one-third of the total expenditure, and it is by no means improbable that Londoners may also be compelled to make the same arrangement, and sacrifice, like their neighbours, either service, or food, or little personal comforts. At present, however, they fight against submission almost ferociously, and insist that they can and will lodge themselves for a seventh, or, at all events, for a sixth, of their expenditure, that is, at a total outlay of £60 a year, rent and taxes included. A few of them, by the exercise of untiring patience and unusual common sense, succeed, getting an old and, therefore, comfortable, small house, at the figure they have fixed; but the infinite majority are hopelessly beaten in the search. Either they have to add ten or twenty pounds a year to their estimate, losing a comfort for every pound, or they are driven into a new house, one of the thousands rising every year all round London, built upon leasehold land, with the single object of being let for the highest interest obtainable for the outlay. To judge by the gradual diminution in the length of leases, which have receded from 90 years to 50, and even 35, within the memory of man, and the severity of competition, the interest sought is a high one, and it is obtained by deliberately erecting bad buildings. Either the drainage is imperfect, or the roof requires constant repair, or the walls will not keep out the cold, or, worst plague of all, the entire house is permeable by all sounds. We have been told by architects that this grievance, which to the majority of men is absolutely intolerable, is the result of carelessness, as it could be corrected without expense; but the nuisance is nearly universal in new houses, and we suspect "W. H. W." is right, and that the "careless" building saves the builder's money. It is not a matter, as "W. H. W." seems to think, of thickness of bricks, but of the quality of the materials, and the honesty with which they are used. We can show him houses in London with fourteen-inch walls in which he can hear every cry of children on both sides. No change is of any use, those who flit as our correspondent did from year to year only changing the form of annoyance, and being pursued everywhere, from street to street and village to village and row to row, by that dreadful permeability to sound. A removal, too, is the most wasteful of operations. The tenants feel like so many Babbages without the professor's right of recourse to the police courts,—for though an action against a piano is possible, it makes a man ridiculous,—and they get into a state of irritation in which their next-door neighbours seem malicious fiends, or themselves the victims of that torturing disease, nervous exaltation of the sense of hearing.

One-half, probably, of such professionals contemplate at one period or other of their lives building for themselves, but very few have the nerve or the means to set about it. "W. H. W." was most exceptionally fortunate. Sites, despite our correspondent's experience, are extremely difficult to obtain near London, and are snapped up as they enter the market by the builders, who are convenient purchasers, as they buy in large parcels and require for many houses only one set of deeds. Even if a site is obtainable, the unlucky experimenter is

only at the beginning of his troubles. An architect such as "W. H. W." found is very rare, more especially an architect who will really look, as his friend appears to have done, into the details of the actual work; and the owner himself is quite powerless in the matter. To draw the plan of a small house seems a very simple affair; but non-professional men who try it usually find that their skill ends with the first floor, that they can get neither upstairs nor downstairs, that the kitchen has no light, and that the corridor to connect the bedrooms has a most dangerous curve. We have heard of an amateur of this kind who omitted the staircase, and of another—this is a fact—who submitted a plan with obvious exultation to an architect, admitted with mock modesty that it was "a little rough," but suggested that "in substance" it could hardly be improved. There was not a chimney in the concern. A skilled architect is indispensable, and a skilled architect who will give a good plan for a small house and help to carry it out for a moderate fee is a man who, if he were known, would be loaded in a week with decidedly unprofitable work. There must be men to whom such employment would be acceptable; but too often they are either without originality, or have an itching for profit fatal to honest work. Then comes the building. The natural way to build is to contract for a house on such and such a plan, with a clear specification; and were all contractors honest, this would be universally adopted. The contractor knows, and the owner does not; and were the contractor to sell his knowledge and nothing else, were he, that is, to charge the cost price to a farthing, and add his own fee as a distinct item, an arrangement might be very easily effected. A deep distrust of contracts has, however, sunk into the public mind, while the contractor dreads the British form of meanness, almost the only one incessantly displayed, the reluctance to pay fairly in a lump sum for intangible things like skill and superintendence. The owner who meant to spend £800 on a house would think £80 enough for the contractor, who was probably all that out of pocket by loss of interest. The builder, therefore, supplies goods as well as skill, and under the pressure of competition, brings his nominal prices as low as he can, and takes his profit out in inferior material and the small swindles classed as "extras." Of the only two alternatives, one, to build for oneself, that is actually to superintend the building, is usually a silly waste of time; and the other, to select a trustworthy, able, and at the same time cheap foreman of the works, is the most difficult of tasks. It is in that direction, however, that intending builders should look; and then if they get a good architect, and a good plan, and a good foreman, and find a good site, and have the good sense to defy the vulgar opinion of silly neighbours impatient of tiling and intolerant of shutters, they may get a really good house for "W. H. W.'s" price, £50 a year, without possible increase of rent.

With "W. H. W.'s" idea that the waste of money is usually in ornament we entirely concur, though wooden chimneypieces are dangerous mistakes while brickwork is to be had and Minton sells tiles; but we should like to ask Mr. Kerr or some architect of his calibre a question. What is the reason why the roof of the house should not be, in the country, at all events, a pleasant promenade, the children's playground? Flat roofs are common throughout the East, and in India universal; what is the special objection to their use in England? What should make a flat roof coated with bitumen, covered with Minton's tiling, and surrounded with a wall, a very costly or inconvenient addition to a house? It would drain perfectly, would if properly made transmit no noise, and would afford just what "villas" want, a good play-room for noisy children in fine weather. We are well aware, of course, that in houses so built that dancing is forbidden in the lease such an addition would be impossible, but assuming a decently well-built house, what is the fatal objection which throughout England has prohibited this form of architecture, so general where it is not particularly required,—in countries, for instance, like Bengal, where anybody who slept on the roof, as mankind are supposed to do in "the East," would wake with a rheumatism which would last his life?

## BRAIN-WAVES.—A THEORY.

[TO THE EDITOR OF THE "SPECTATOR."]

SIR,—A collection of authenticated ghost stories relating to contemporary persons and events would not only be curious and interesting, but might serve to throw light on one of the darkest fields of science, a field, indeed, hardly yet claimed by science.

The mere collocation might bring out features suggestive of a law. If to such a collection were added so many of the "manifestations" of mesmerists, spiritualists, electro-biologists, and clair-

voyants as have a clear residuum of fact (and after a sweeping deduction of professional contributions), the indication of a common action of force through them all might probably become still more obvious.

Such statements as the following, coming as they do within the scope of a single person's observation, may, doubtless, be taken to stand for very many similar ones.

In giving them as sample narratives, I do so with two objects, firstly, to commence in your pages, if you are willing to open them for it, a veracious and authenticated catalogue of such experiences; and secondly, to venture on a crude hypothesis by way of explanation, which, of course, will be taken merely for what it is worth, but which has appeared plausible to some. It may, perhaps, at any rate serve as a temporary thread whereon to collect illustrative or contradictory instances.

Mr. Robert Browning, of whose keen study of the subject his poem of "Mr. Sludge, the Medium," would be alone sufficient proof, tells me that when he was in Florence, some years since, an Italian nobleman (a Count Ginnasi, of Ravenna), visiting at Florence, was brought to his house, without previous introduction, by an intimate friend. The Count professed to have great mesmeric or clairvoyant faculties, and declared, in reply to Mr. Browning's avowed scepticism, that he would undertake to convince him somehow or other of his powers. He then asked Mr. Browning whether he had anything about him then and there which he could hand to him, and which was in any way a relic or memento. This, Mr. Browning thought, was perhaps because he habitually wore no sort of trinket or ornament, not even a watch-guard, and might, therefore, turn out to be a safe challenge. But it so happened that by a curious accident he was then wearing under his coat-sleeves some gold wrist-studs to his shirt, which he had quite recently taken into use, in the absence (by mistake of a sempstress) of his ordinary wrist-buttons. He had never before worn them in Florence or elsewhere, and had found them in some old drawer where they had lain forgotten for years. One of these gold studs he took out and handed to the Count, who held it in his hand awhile, looking earnestly in Mr. Browning's face, and then said, as if much impressed, "C'è qualche cosa che mi grida nell'orecchio, 'Uccisione, uccisione!'" ("There is something here which cries out in my ear, 'Murder, murder!'")

"And truly" [says Mr. Browning,] "those very studs were taken from the dead body of a great-uncle of mine, who was violently killed on his estate in St. Kitt's, nearly 80 years ago. These, with a gold watch and other personal objects of value, were produced in a court of justice as proof that robbery had not been the purpose of the slaughter which was effected by his own slaves. They were then transmitted to my grandfather, who had his initials engraved on them, and wore them all his life. They were taken out of the night-gown in which he died, and given to me, not my father. I may add, that I tried to get Count Ginnasi to use his *clairvoyance* on this termination of ownership also; and that he nearly hit upon something like the fact, mentioning a bed in a room; but he failed in attempting to describe the room—situation of the bed with respect to windows and door. The occurrence of my great-uncle's murder was known only to myself, of all men in Florence, as certainly was also my possession of the studs."

Mr. Woolner, the sculptor, tells me the following story of two young men,—one of them a personal friend of his own, now living. These two men lived for very long as great friends, but ultimately quarrelled, shortly before the departure of one of them to New Zealand. The emigrant had been absent for many years, and his friend at home (Mr. Woolner's informant), never having kept up correspondence with him, had naturally almost lost the habit of thinking about him or his affairs. One day, however, as he sat in his rooms in a street near Oxford Street, the thought of his friend came suddenly upon him, accompanied by the most restless and indefinable discomfort. He could by no means account for it, but, finding the feeling grow more and more oppressive, tried to throw it off by change of occupation. Still the discomfort grew, till it amounted to a sort of strange horror. He thought he must be sickening for a bad illness, and at length, being unable to do anything else, went out of doors and walked up and down the busiest streets, hoping by the sight and sound of multitudes of men and ordinary things to dissipate his strange and mysterious misery. Not, however, till he had wandered to and fro in the most wretched state of feeling for nearly two hours, utterly unable to shake off an intolerable sort of vague consciousness of his friend, did the impression leave him and his usual frame of mind return. So greatly was he struck and puzzled by all this, that he wrote down precisely the date of the day and hour of the occurrence, fully expecting to have news shortly of or from his old friend. And surely, when the next mail or the next but one arrived, there came the horrible news that at that very day and hour (*allowance being made for longitude*) his friend had been made prisoner by the natives of New Zealand, and put to a slow death with the most frightful tortures.

Of this same kind, though happily different in result, is a story of his own experience, which Mr. Tennyson, the Poet Laureate, tells me, viz., that some years ago he was induced to try (successfully) the curative effect of mesmerism by passes of the hands upon a patient, who became so sensitive as to be aware on one occasion of his approach by railway two hours before he reached the house, and when his coming was entirely unannounced and unpremeditated. On another occasion, the same patient positively asserted to a third person that Mr. Tennyson had been there the day before, when Mr. Tennyson himself was equally positive to the contrary,—till he afterwards remembered that he had come as far as the grounds of the house, and then changed his mind and turned back.

So far for authenticated sample narratives, to which, as I have said, many more may probably be added with due care.

To come now to my crude hypothesis of a *Brain-Wave* as explanatory of them and of kindred stories.

Let it be granted that whensoever any action takes place in the brain, a chemical change of its substance takes place also; or, in other words, an atomic movement occurs; for all chemical change involves—perhaps consists in—a change in the relative positions of the constituent particles of the substance changed.

[An electric manifestation is the likeliest outcome of any such chemical change, whatever other manifestations may also occur.]

Let it be also granted that there is, diffused throughout all known space, and permeating the interspaces of all bodies, solid, fluid, or gaseous, an universal, impalpable, elastic "Ether," or material medium of surpassing and inconceivable tenuity.

[The undulations of this imponderable ether, if not of substances submerged in it, may probably prove to be light, magnetism, heat, &c.]

But if these two assumptions be granted, and the present condition of discovery seems to warrant them, should it not follow that no brain action can take place without creating a wave or undulation (whether electric or otherwise) in the ether; for the movement of any solid particle submerged in any such medium must create a wave?

If so, we should have as one result of brain action an undulation or wave in the circumambient, all-embracing ether,—we should have what I will call *Brain-Waves* proceeding from every brain when in action.

Each acting, thinking brain then would become a centre of undulations transmitted from it in all directions through space. Such undulations would vary in character and intensity in accordance with the varying nature and force of brain actions, e.g., the thoughts of love or hate, of life or death, of murder or rescue, of consent or refusal, would each have its corresponding tone or intensity of brain action, and consequently of brain-wave (just as each passion has its corresponding tone of voice).

Why might not such undulations, when meeting with and falling upon duly sensitive substances, as if upon the sensitized paper of the photographer, produce impressions, dim portraits of thoughts, as undulations of light produce portraits of objects?

The sound-wave passes on through myriads of bodies, and among a million makes but one thing shake, or sound to it; a sympathy of structure makes it sensitive, and it alone. A voice or tone may pass unnoticed by ten thousand ears, but strike and vibrate one into a madness of recollection.

In the same way the brain-wave of Damon passing through space, producing no perceptible effect, meets somewhere with the sensitized and sympathetic brain of Pythias, falls upon it, and thrills it with a familiar movement. The brain of Pythias is affected as by a tone, a perfume, a colour with which he has been used to associate his friend; he knows not how or why, but Damon comes into his thoughts, and the things concerning him by association live again. If the last brain-waves of life be frequently intensest—convulsive in their energy, as the firefly's dying flash is its brightest, and as oftentimes the "lightening before death" would seem to show—we may perhaps seem to see how it is that apparitions at the hour of death are far more numerous and clear than any other ghost stories.\*

Such oblique methods of communicating between brain and brain (if such there be) would probably but rarely take effect. The influences would be too minute and subtle to tell upon any brain already preoccupied by action of its own, or on any but brains of extreme, perhaps morbid, susceptibility. But if, indeed, there be radiating from living brains any such streams of vibra-

\* The experience of Admiral Beaufort when drowning (confirmed by other similar accounts) points to an extreme and marvellously intense action of the brain just before death. Some years since a ghost club existed at Cambridge which sifted all the stories it could find, and concluded that those only bore the test of searching inquiry which concerned apparitions at the hour of death.

tory movements (as surely there must be),† these may well have an effect, even without speech, and be, perhaps, the *modus operandi* of "the little flash—the mystic hint," of the poet,—of that dark and strange sphere of half-experiences which the world has never been without.

There surely are brains so susceptible, and so ready to move to the slightest sympathetic touch, that

"Thought leaps out to wed with Thought,  
Ere Thought could wed itself with speech."

Such exceptionally sensitive and susceptible brains—open to the minutest influences—would be the ghost-seers, the "mediums" of all ages and countries. The wizards and magicians—true or false—the mesmerists and biologists would be the men who have discovered that their brains can and do (sometimes even without speech) predispose and compel the brains of these sensitive ones, so as to fill them with emotions and impressions more or less at will.

It will but be a vague, dim way, at the best, of communicating thought, or the sense of human presence, and proportionally so as the receiving brain is less and less highly sensitive. Yet, though it can never take the place of rudest articulation, it may have its own place and office other than and beyond speech. It may convey sympathies of feeling beyond all words to tell,—groanings of the spirit which cannot be uttered, visions of influences and impressions not elsewhere communicable, may carry one's living human presence to another by a more subtle and excellent way of sympathy.

"Star to star vibrates light: may soul to soul  
Strike thro' a finer element of her own?  
So, from afar, touch us at once?‡

The application of such a theory to such narratives as I have given above is obvious.§ In Mr. Browning's case, his brain, full of the murder-thought, and overflowing with its correspondent brain-wave, floods the sensitive brain of the Count, who *feels* it directly. His attempt to read the second transfer of ownership is almost as illustrative as his closer success with the first. The death-bed thought and its correspondent brain-wave were sufficiently strong and striking in Mr. Browning's mind to have a character of their own; the rest of the complicated picture was too minute and ordinary, did not burn itself into or out of his brain with enough distinctness. The prominent notes of the music were alone caught by the listener.

In Mr. Woolner's case,—the death-convulsion of the emigrant's brain, and the correspondent brain-wave flooded space with the intensity and swiftness of a flash of actual light or magnetism, and wheresoever it happened to find the sympathetic substance, the substance accustomed to vibrate to it, and not too violently preoccupied with other action to be insensible to such fine impressions, shook it with the terrible vague subtle force of association described. The intervening space and matter need be no more an obstacle than the 3,000 miles of Atlantic wire are to the galvanic current, or the countless distances of its travel to the light from Sirius. A similar explanation holds good for Mr. Tennyson's story, in which the less distances seem somehow less staggering at first sight.

In such a manner, too, the answers given by the so-called "spirit-rapping" (when not imposture) seem explicable. These are made by the spelling-out of words letter by letter, the questioner alone knowing the reply, and the letter which would be right to help it. The character of his thought, and consequent brain-wave, changes from denial to consent, when, letter after letter being pointed to in vain, the right letter is reached at last. That change of thought-state is reflected in a change of brain-action and wave-movement, which the sensitive medium *feels*, and at once acts upon.

Many ghost and dream stories seem to yield also to some such mode of interpretation, and much might be added in illustration and expansion of it, as touching rumours, presentiments, panics, revivals, epidemic-maniacs, and so forth; but I have said enough to put the suggestion before better minds, whether for correction or disproof.—I am, Sir, &c.,  
J. T. K.

[If, in compliance with the suggestion of our correspondent, any facts of the class referred to should be communicated to us by

† No doubt atomic movements, causing waves in space, must start from other parts of the body as well as from the brain, and, indeed, from the fluctuations of all material bodies (whence Hitchencock's ingenious fancy of the "Universal Telegraph"). But the question here is simply limited to how *brains* are affected by the movements of other brains. Just as the question of how one pendulum will make other pendulums swing with it is a fair mechanical inquiry by itself, though, doubtless, other questions would remain as to how the movement of the pendulum would affect all other material bodies, as well as pendulums in the same room with it.

‡ *Aylmer's Field*.

§ I need hardly say that I alone am responsible for such an attempt at explanation of these narratives, and not their authors.

our readers, we may as well state that we shall make no use of them, unless in all cases carefully authenticated by very well known names or scientific names.—Ed. *Spectator*.]

## HOUSE-BUILDING.

[TO THE EDITOR OF THE "SPECTATOR."]

SIR,—A few years ago it was considered advisable for the sake of my health that I should live a little way out of London. I spent a good deal of time in looking out for a house, some weeks perhaps, but could see nothing that suited me. At last I found one that I thought would do. It seemed substantially built, something better than suburban houses are generally, and the rent was low. I took it for a term of three years, miserable me! and before I had been in it six months would have given the rent for all the remainder of the term, if I had had the money, to have got rid of the bargain. In summer time it was tolerably pleasant; but in winter it was dreadful. The wind came through the thin walls and the tall windows without any let or hindrance whatsoever, and the chimneys smoked so intolerably that it was with great difficulty we could keep a fire alight. We have sat in one of those sitting-rooms cowering under a fence of railway rugs, propped up by walking-sticks on the sofa, and with the thermometer down to 38°. I should exceed the space at your disposal if I were to tell all that happened to us while we were there, or what happened to us after we left. We got into a house where the water came in, and during every shower the hand-basins and sponging-baths had to be arranged all over the bedrooms and staircases. We got into another where the partition walls between us and the next "villa" were half-a-brick thick, and we heard a piano all day long as distinctly as if it were in our own room. That was the worst infliction of all, worse than rain or wind. There was no escape from it. The noise travelled over the whole place like electricity over wires, and almost drove us to desperation. All sorts of expedients were tried, such as stuffing cotton in our ears when we went to bed and thumping at the wall with pokers. It was of no use, and that twelvemonth was perhaps the most wretched of all my existence. At last, weary of failure after failure to find even a decent house at a moderate rent, I scraped together what little money I had, borrowed some more, and determined to build. I knew every inch of all the country within fifteen miles of London in the direction in which I wished to go, and was consequently enabled at once to pitch upon a small piece of freehold land at a low price in a good situation. The next thing to be done was to get an architect. How I got mine I shall not tell, because I don't want to make my letter an advertisement. Suffice to say, I did get one who thoroughly understood what I wanted, and we set to work.

The problem we had to solve was this: to build a detached house, with two sitting-rooms, study, four bedrooms, and offices, in the most solid manner, and to provide for warmth all over it, for £800. In due time I was furnished with a plan. It was one of the most ingenious for economizing space and providing all sorts of conveniences I ever saw. The principal sitting-rooms were sixteen feet by fourteen, and one of them had a pleasant bay window. The two principal bedrooms were a little larger and lofty, while the other two bedrooms were yet big enough to put in each of them a couple of children or two servants. There was no lath and plaster, all the rooms being divided one from the other by nine-inch brick walls; and in the passage a corner was found for a fireplace, whereby to heat in frosty weather the stairs and bedrooms adjoining. In order to bring our estimates within the necessary limits, we had to economize in a good many ways, and this is how we did it. The outside walls up to the top of the ground floor were of fourteen-inch brickwork. In order to avoid stucco we had timber above, covered with three courses of common red tiles, after the fashion of numberless old cottages which you may see any day in the more remote parts of Sussex and Surrey. Above the tiles, in the gables which front the road, we put plaster, with the woodwork showing through. These tiles are the abhorrence and scandal of all my neighbours, who are utterly unable to comprehend a building near London which is not "in the Gothic," nor yet stucco. They come up the road on purpose to stand opposite, stare, grin, and murmur. With what unanimity they all hit upon the same observation is wonderful—"That man must have been his own architect." However, I have had my reward. I have not had to endure the stucco which I hate, and yet during all these tremendous gales, with almost horizontal rain, not a drop has penetrated through my tiles, while it has driven through many of the neighbours' "villas" as if they were tissue-paper, even where the brickwork was unusually good. But it was in the fittings that we saved the most. We have no expensive grates. The fireplaces are in the form of a