

water mark. The enterprise of constructing and maintaining a railroad bridge of such dimensions at a point so low down in the course of the giant stream will deserve to rank among the great mechanical achievements of the century.

### THE INSTINCT OF ANIMALS.

In a recent issue of the San Francisco *Chronicle* the subject of the instinct of animals is interestingly discussed. The writer argues against the notion entertained by some, that the instinct of the animal creation is in many instances superior to the intellect and knowledge of man. It is an admitted fact that the senses of some of them are developed to an extraordinary degree. A few birds, for instance, have the faculty of seeing their prey from a considerable distance in the air; the rabbit and the deer have the sense of hearing, and the dog the sense of smelling exceedingly well developed, and they are in these respects more favored than man, unaided by artificial contrivances; but beyond that, the article referred to says, the instinct of animals does not extend. It concludes:

A bird or beast is like man in regard to the weather. It judges by what it feels at the moment and by what it sees about it. If it is warm or cold, if it rains or the sun shines, it is apt, like a simple human being, to suppose that the cold, the heat, the rain and the sunshine are likely to continue indefinitely, which is naturally an error. It is really time that these extravagant notions in regard to the prophetic instinct of animals, beyond the simple premonitions depending on their perceptions of the moment, should cease. They have no solid foundation of science.

The views expressed are probably in the main correct. But there are phenomena in what may be called the psychical life of animals, which are highly interesting and which cannot be accounted for on the principle of highly developed senses. When a camel, for instance, in the desert where no sign of vegetation can be seen, with unerring accuracy directs his steps towards the nearest spring of refreshing water, though this may be miles off, it is hard to believe that he is guided only by outward senses. Equally difficult of explanation is the fact that the sea gull and other water birds will find the shores of the nearest land, when they are on the trackless ocean. The wonderful ability of pigeons to find their homes is well known. They may have been taken in a closed cage on a train or a steamer hundreds of miles away from their familiar surroundings, but on being liberated, they will, without hesitation, start in the right direction and return by the shortest route.

Equally interesting animal traits are told by observers, showing that many creatures have premonitions of coming disasters. These may not be very definite, but they certainly are strong enough to cause them to feel anxiety to a marked degree. Everybody has heard of the firm belief of many sailors that rats leave a ship threatened with destruction. The idea may be declared superstition; but is there for it no foundation in facts

as observed by the sons of the deep? Barleto, in his *Letters About Calabria and Sicily*, describing the terrible earthquake in 1783, asserts that animals previous to the disaster showed signs of uneasiness and fear long before the doomed inhabitants were aware of their fate. Dogs, he says, were seen to run from one place to another and utter strange sounds, expressive of fear; cattle became uneasy, and some domesticated animals were seen to leave the city of Messina in wild terror before the first shock occurred. Facts of this kind cannot be overlooked in a discussion of the instinct of animals. Science may not have found the true key to them, but they are not the less real, nor less interesting.

Man in his selfish pride is too apt to overestimate himself and overlook the wonders of the creation in which he has been placed as a central figure. But only he who duly appreciates the workmanship of the Creator in his innumerable surroundings can feel his heart swell with gratitude and adoration; only he understands the saying of an inspired author, that "the creature itself also shall be delivered from the bondage of corruption into the glorious liberty of the children of God."

### CO-OPERATION IN HOUSEKEEPING.

The *National Economist* outlines a scheme of co-operative housekeeping which is going to be tried in Chicago "for the benefit of married men with small incomes." The experiment is not going to fail for lack of complete and extensive preparations, for by way of starter a \$200,000 home is to be erected, covering an entire block in Hyde Park. The colony will consist of forty-four houses on forty-six lots, with a common lawn, laundry, kitchen, furnace, electric light plant, assembly hall and reading room. The central court will contain a common building, where all the drudgeries will be performed. Here will be seen the cooking, heating and lighting machinery, the ice chests, grocery store-rooms and vegetable cellars, the dish-washers, servants and butler. The forty-four families will need but fourteen people to do all their household work. These people include the baker, the professional cook, a gardener, a superintendent, two engineers and the corps of helpers. Mrs. Coleman-Stuckert, the lady who is managing the movement, claims that this saves the salaries of at least eighty domestic servants, besides having the food cooked economically and in excellent taste. An electric carrier will deliver the cooked meals.

The details of the scheme are equally plausible and interesting. Take for instance the matter of dining: Each house will be a station, and when the big dinner gong sounds, the company cook will push the button and send out forty-four smoking dinners. Each hamper will be heated, so that the hot vlands and vegetables will be at their prime. Each matron will serve the meal in the company dishes or her own—the hamper will then go back for the second course and the third, until the dessert and coffee are reached. Mrs. Coleman-Stuckert

promulgated all these facts on paper during the World's congresses last summer, and her diagram shows it will cost only \$2 a week for each person.

Further particulars of the experiment may be thus summarized: From the joint heating and lighting plant each house will get its steam at cost from its own boiler, and all this branch of the household economy will aggregate but a modicum of the usual expense for each family. A family consisting of man and wife, the former earning say \$85 per month, will have a suite of six rooms. These figures are applicable only to the second best system of co-operative homes. The proprietor has a plan for one for the very wealthy and another for the very poor. She claims that they are all equally practical, and she is going to prove that this is the way to live by building the first one in Hyde Park. This new home will not occupy one big building and thus have the characteristics that belong to existence in a hotel. Every family will be allotted a house, with room sufficient for the members. Each tenant is to become a householder and own his own rooms and thereby become a stockholder and voter in the common affairs of the community. He will select such a location as he can afford—the prices ranging from \$2,000, and he will pay on the installment plan.

There should be no reason why a colony of this kind, composed of the right sort of people—families that are agreeable to each other—the whole managed carefully and with discretion, can not be made a social and economical success in every sense. Mrs. Coleman-Stuckert's experiment will be watched with the keenest interest; carried out in the proper spirit, it will make her a real benefactor of the race.

### THE EARTHQUAKE IN GREECE.

The disastrous earthquake that recently occurred in Greece is among the most notable ones in recent years in that part of the world. The official reports show that the whole coast line from Larvina to Theopolyte suffered terribly. In one district alone three hundred people lost their lives, and an idea may be formed of the mighty convulsions of nature from the statement that in seven hours not less than 315 shocks were counted. During this commotion houses tottered and fell; the surface of the earth heaved like a stormy sea; huge masses of rock were detached from the mountains and hurled into the valleys below with a crash like thunder; the coastline was changed, the shore in some places sinking six feet and allowing the water to rush in; torrents of boiling water were spouted forth into the air, and the disturbance was felt more, or less in the whole kingdom striking terror in the hearts of the inhabitants of palaces as well as of lowly huts. It is during occurrences of this kind that the insignificance of man is realized as never before.

The district now devastated by these seismic disturbances is one full of classical interest. The city of Atalanta, for instance, brings to mind the beautiful myth of the swift Arcadian huntress of that name, whom no mortal could