

als did he mean to restate by those six, etc. I do not by any means say that this is the case, or that Browning is not a great original poet for other reasons than a somewhat complicated syntax. I am only taking the liberty of using him, with the permission of his admirers, as an illustration; just as I have used Shakespeare as an illustration of a poet whose works have lived because (as I think) they are not purely didactic, or purely cumulative of examples of those principles and tendencies with which the world, since the date of its emergence from chaos, has been perfectly familiar.

Is it not a fact, that if, three hundred years from this date, a twenty-second century man should come across one of Mr. Harrigan's dramatic pieces (one of the "Mulligan" series, for example), he would find in it more chronicle of the familiar manners of the nineteenth century than he will find in Mr. Browning's poetry? Should the twenty-second century sociologist or philologist be interested in the city of New York, for example, will he not be more instructed by one of Mr. Harrigan's "Mulligan" plays than by reiterations, however antiquarian their sources, of those truths of human nature with which doubtless his own twenty-second century literature will teem? Men and women are pretty much alike in any century, have always been and doubtless always will be—the same passions, motives, and frailties. The comparative safety of virtue, and perilousness of vice; that goodness is rewarded and badness punished,—are items which doubtless the twenty-second century reader will concede as freely as we do. Nor will a narrative, however distinctly re-teaching those admirable lessons, become solely on that account immortal. The twenty-second century man will doubtless be fairly aware of the average moral probabilities. But, should he be a student of intellectual progress, or curious as to the Browning century, and desire to learn about this nineteenth-century poet's American cousins (to learn about as much of them as Shakespeare has dropped as to his own contemporary Dutchman and Frenchman and Spaniard); should he happen to direct his inquiries as to what were the manners, not of superior persons, but of the general, in the metropolis of the western nineteenth-century world; should he unearth its motley *mise en scene*, where Christian, Jew, and Pagan, where Occidental, Oriental, and African (white, yellow, and black), were all massed in good-natured communion,—he would find in one of Mr. Harrigan's pieces as rich a storehouse of folk-lore, and annotate it as eagerly and as learnedly as we annotate the "Comedy of Errors" or the "Merry Wives of Windsor." He would make notes upon the fact that such interesting ellipses as "Go chase yourself around the block," or "Take a drop, will you?" were an invitation to over-much pretension to descend from its stilts, with quite as much appetite, for example, as we to-day discover that such "sabre cuts of Saxon speech" as "painting the town red,"¹ or to "fire out,"² or "to shake,"³ or "It's a cold day"⁴ (meaning a day of disappointment), or "too thin,"⁵ are actually resurrections from the Shakespearian day and date.

[Continued on p. 288.]

¹ 1 Henry IV., II. iv. 13.

² Sonnet, cxliv. 14; Passionate Pilgrim, ii. 14.

³ Lear, I. i. 42.

⁴ Cymbeline, II. iii.; 2 Henry VI., I. i. 237.

⁵ Henry VIII., V. iii. 125.

NOTES AND NEWS.

THE Philopatrian Society of New York have waited upon Provost Pepper of the University of Pennsylvania with a view of establishing a chair in Gaelic at that institution. The question is under consideration.

—The Mexican Government has granted a concession to a company to construct a railroad from a point on the Inter-Oceanic Railway to the volcanoes of Popocatepetl and Ixtaccihuatl, and up the sides of those mountains.

—The United Electric Traction Company has been organized in this city, with a capital of seven million dollars. The new company is virtually a consolidation of all the various Daft electric companies into one central company. This will doubtless give a new impetus to the development of electric traction.

—The American Metrological Society, at a meeting held in Washington last month, advocated the adoption of the metric system by the government for custom-house and foreign mail service. The metric system is now used by twenty-four nations in invoicing goods for shipment abroad, and many of them use it for all purposes.

—The council of the Appalachian Mountain Club has issued invitations to a number of persons throughout the State of Massachusetts to a conference, to consider the subject of the preservation of natural scenery and historic sites in that State. The conference will be held at the Massachusetts Institute of Technology, on Saturday, May 24, at 12 noon.

—At the commencement of the Medical and Dental Departments of the University of Pennsylvania, held May 1, there were graduated 117 in medicine and 70 in dentistry. Of these, 3 were from Brazil, 2 from Cuba, 5 from Germany, 3 from Switzerland, 3 from Scotland, and one each from Hayti, Nicaragua, New Brunswick, Prince Edward Island, Nova Scotia, Japan, England, and United States of Colombia.

—Some interesting experiments on the physiology of sponges have been recently made by Dr. Lendenfeld of Innsbruck (*Humboldt*). He operated with eighteen different species, putting carmine, starch, or milk in the water of the aquarium, and also trying the effect of various poisons,—morphine, strychnine, etc. The following are some of his results, as we learn from *Nature*: absorption of food does not take place at the outer surface, but in the interior; only foreign substances used for building up the skeleton enter the sponge without passing into the canal-system. Grains of carmine and other matters often adhere to the flat cells of the canals, but true absorption only takes place in the ciliated cylindrical cells of the ciliated chamber. These get quite filled with carmine grains or milk spherules, but starch grains prove too large for them. Remaining in these cells a few days, the carmine cells are then ejected; while milk particles are partly digested, and then passed on to the migratory cells of the intermediate layer. Any carmine particles found in these latter cells have entered accidentally through external lesions. The sponge contracts its pores when poisons are put in the water, and the action is very like that of poisons on muscles of the higher animals. Especially remarkable is the cramp of sponges under strychnine, and the lethargy (to other stimuli) of sponges treated with cocaine. As these poisons, in the higher animals, act indirectly on the muscles through the nerves, it seems not without warrant to suppose that sponges also have nerve cells which cause muscular contraction.

—The four most valuable minerals found in Persia are coal, iron, copper, and lead, while it has been ascertained that there are large deposits of the purest petroleum in south-west Persia. In the north a coal-field of great extent has been proved to exist in the neighborhood of Teheran. The coal has been tested, and experts affirm that it will bear comparison not unfavorably with the best English coal. Another coal-field of excellent quality has more recently been discovered in the Gisakim Hills, less than fifty miles from Bushire. The total area covered by the coal-fields of Persia is believed to be vast. Nor are the iron mines less promising than coal. Those in the vicinity of Teheran, according to *Bradstreet's*, are very rich, the ore containing about 70 per cent of metal; and they are situate within half a mile of the coal field.

Iron does not seem confined to the one spot, iron and coal occurring in juxtaposition throughout the hills skirting the road from the capital to Kazvin, or even farther west. Much of the Persian iron is noted as containing hardly any sulphur and no phosphorus.

—One of the important objects of the American Museum of Natural History is the collecting and preserving a library of books and pamphlets; and to this object its trustees make an earnest appeal to its friends for their co-operation. Two very valuable libraries have been presented to the museum, — one on conchology, by Miss C. L. Wolfe; and the other on ichthyology, by Robert L. Stuart. The paper-mills of our country are annually grinding up tons and tons of old and new books of value to scientific institutions, and in some cases making it almost impossible to obtain them for the completion of sets. It is therefore desirable at once, so far as practicable, to secure copies of every thing which has been printed on natural history; for in this age of scientific research there is nothing which may not at some time be useful.

—The University of Pennsylvania authorities have at last taken a hand in college athletics, and hereafter the students will be more restricted in the various sports. The following rules, drawn up by a committee consisting of several of the faculty and representative undergraduates, will in the future govern all college contests: No student whose general average in the mid-term or term report is below "medium" shall be permitted to engage in any university athletic contests or match rowing-races, or play in any match games of base-ball, foot-ball, cricket, tennis, lacrosse, etc.; no student shall train for or enter any university athletic contest or rowing-race, or play in any match game of base ball, foot-ball, cricket, tennis, lacrosse, etc., without the consent in writing of Dr. Leuf; the university athletic contests and match rowing-races shall be held only on Saturdays or holidays; match games of base-ball, foot-ball, cricket, tennis, lacrosse, etc., may be played on the university grounds, on days other than Saturdays or holidays; after 3 P.M.; no team, or crew, or representative of the athletic clubs or associations, shall make more than one engagement each week to play outside of Philadelphia, excluding Saturdays and holidays.

—At a recent meeting of the American Academy of Political and Social Science, held in Philadelphia, Professor E. J. James of the University of Pennsylvania read a novel and interesting paper. He said that for the last nine months a most interesting experiment in railroad management has been going on in Hungary. As a result, a new system of passenger tariffs was worked out and put into operation on the first of August, 1889. The method adopted was that commonly known as the zone-tariff system, in which the rates are fixed, not according to the number of miles travelled by the passenger, but according to the number of zones traversed or entered upon during the journey. Starting from a given centre, the railroads are divided into fourteen zones or stretches. The first zone includes all stations within 25 kilometres of the centre; the second, all more than 25 and less than 40, etc.; each zone after the first, up to the twelfth, being 15 kilometres long, or, as we should perhaps better say, wide. Tickets are sold by zones, being good for all stations within the zone. How radical a change this system implies for a large part of the traffic can be seen in the extreme cases; i.e., in those in which the reduction has been the greatest. The fare for all stations in the fourteenth zone, which includes all stations more than 225 kilometres from the capital, are 8, 5 80 and 4 gulden respectively for the three classes, corresponding to \$2 88, \$2 08, and \$1.44. If we had the same rate in this country, it would be possible to buy a railroad-ticket to Chicago from New York for \$2.92. The fare from New York to Philadelphia would be 29 cents. The simplification of the tariff is very great. Under the old system, the number of distinct tickets which had to be kept in every large office was nearly 700. It is now only 92. The railroad-tickets are now placed on sale like postage stamps at the post-offices, hotels, cigar-shops, and other convenient places. The public is greatly pleased at the discarding of the complicated machinery of ticket-selling as practised under the old system. The most interesting thing, however, in this experiment, is the way in which the passenger traffic has increased under the stimulus of the new

rates. The number of passengers during the last five months of 1887 was 2,389,400; during the same period of 1888 it was 2,381,200; while for the same period of 1889 — the first period under the new system — it was 5,584,600, an increase of over 133 per cent. The receipts from the traffic under the new system were over 18 per cent greater than under the old. In other words, passenger traffic will respond to lower rates, — a thing which some railroad managers have denied. It would be well for our own railroad managers, who complain that passenger traffic is not profitable, to look into the matter. The American people, reputed to be the most restless in the world, do not have nearly as many passengers per head of the population as England, and it is far exceeded in the number of passengers to mile of railway by half a dozen countries of Europe.

—A writer in the *North China Herald* of Shanghai says that the climate of Asia is becoming colder than it formerly was, and its tropical animals and plants are retreating southwards at a slow rate. This is true of China, and it is also the case in western Asia. The elephant in a wild state was hunted in the eighth century B.C. by Tiglath Pileser, the King of Assyria, near Carchemish, which lay near the Euphrates in Syria. Four or five centuries before this, Thothmes III., King of Egypt, hunted the same animal near Aleppo. In high antiquity the elephant and rhinoceros were known to the Chinese, they had names for them, and their tusks and horns were valued. South China has a very warm climate, which melts insensibly into that of Cochinchina; so that the animals of the Indo-Chinese peninsula would, if there were a secular cooling of climate, retreat gradually to the south. This is just what seems to have taken place. In the time of Confucius, elephants were in use for the army on the Yangtse River. A hundred and fifty years after this, Mencius speaks of the tiger, the Leopard, the rhinoceros, and the elephant as having been, in many parts of the empire, driven away from the neighborhood of the Chinese inhabitants by the founders of the Chou dynasty. Tigers and leopards are not yet by any means extinct in China. The elephant and rhinoceros are again spoken of in the first century of our era. If to these particulars regarding elephants be added the retreat from the rivers of South China of the ferocious alligators that formerly infested them, the change in the fauna of China certainly seems to show that the climate is much less favorable for tropical animals than it formerly was: in fact, it appears to have become dryer and colder. The water-buffalo still lives, and is an extremely useful domestic animal, all along the Yangtse and south of it, but is not seen north of the old Yellow River in the province of Kiangsu. The Chinese alligator is still found on the Yangtse, but so rare is its appearance that foreign residents in China knew nothing about it till it was described by M. Fauvel. The flora is also affected by the increasing coldness of the climate in China. The bamboo is still grown in Peking, with the aid of good shelter, moisture, and favorable soil; but it is not found naturally growing into forest in North China, as was its habit two thousand years ago. It grows now in that part of the empire as a sort of garden-plant only. It is in Szechuan province that the southern flora reaches farthest to the northward.

—An interesting little railway has just been opened for traffic in England, between Lynton and Lynmouth, which are separated from each other by a cliff nearly 500 feet high, and are only connected by a road so steep as to be almost impracticable for vehicles. The new line, according to *Engineering*, is 900 feet long, with a uniform gradient of 1 in 1½, which is the steepest incline in the world. In spite of its shortness, the construction of the road has involved considerable difficulties; deep cutting having to be made through solid rock, and several streams of water having to be regulated. The motive power is supplied by water which is brought by 4-inch pipes from West Lynn, a distance of a mile, to a reservoir near the top of the incline. Two cars connected by a wire rope are moved together, the one dragging the other up the line as it descends, the necessary excess of weight being obtained by filling a tank on the car at the top of the incline from the reservoir already mentioned. Safety appliances have been fitted to stop the cars in case of accident.